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An analysis of request-centered relational communication within behavioral consultation using a sample of practicing school psychologists

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An analysis of request-centered relational communication within behavioral consultation using a sample of practicing school psychologists

by

Tracey Lynn Johnson

A dissertation submitted to the graduate faculty

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has met the dissertation requirements of Iowa State University

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GENERAL INTRODUCTION

Statement of the Problem

Many literature reviews and meta-analyses have documented that consultation is an effective form of service delivery to children and youth in school settings (e.g., Mannino & Shore, 1975; Medway & Updyke, 1985). Consultation has been found to result in desirable outcomes, such as reductions in the number of students referred for special education evaluations and improvements in student behavior and academic performance (Graden, Casey, & Christenson, 1985; Gutkin, Henning-Stout, & Piersel, 1988; Hughes & De Forest, 1993; Ponti, Zins, & Graden, 1989). Although consultation has been found to be effective, various literature reviews and meta-analyses of the school-based consultation research (Alpert & Yammer, 1983; Gresham & Kendell, 1987; Medway, 1979, 1982; Pryzwansky, 1986) have reported a need for additional research on the interpersonal communication processes that occur between consultants and consultees during consultation.

Currently, a debate exists among researchers and practitioners regarding the type of consultant-consultee relationship that is desirable. While many researchers and practitioners argue that the consultation relationship should be collaborative and nonhierarchical (e.g., Babcock & Pryzwansky, 1983; Parsons & Meyers, 1984; Wenger, 1979), others have argued that the consultation relationship should be viewed as interpersonal influence process in that the consultant guides the consultee through the process of consultation in order to achieve successful outcomes (e.g., Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990). Researchers have begun to study the nature of the consultation relationship (e.g., Erchul, 1987).

Recently, several research studies focusing on interpersonal communication processes in consultation have been published. There are two main approaches to investigating the interpersonal exchanges between consultants and consultees. One focuses

on the verbal content of consultation interactions as developed by Bergan and Tombari (1975) while the other focuses on relational aspects of the interactions and has been devised by Erchul and his colleagues.

Bergan and Tombari developed an extensive coding system, the consultation analysis record (CAR), of verbal behavior occurring during consultation interviews that has been used to categorize consultant-consultee interactions. Bergan and Tombari (1975, 1976), have shown that behavioral interviewing skills are essential to identifying and solving problems addressed during consultation. Further, behavioral consultants who use structuring techniques, such as asking questions and seeking or offering specifics about the problem, have been found to be more effective (Bergan & Tombari, 1976).

Erchul (1987), Erchul and Chewning (1990), Erchul, Covington, Hughes, and Meyers (1995), and Witt, Erchul, McKee, Pardue, and Wickstrom (1991), have used relational communication coding systems (e.g., Rogers & Farace, 1975) to study the relationship between control and consultation outcomes. They have concluded that effective consultants tend to exercise control over the consultation process by asking questions, offering directives, and initiating topic changes. Further, a pattern of interaction in which the consultant leads and the consultee follows during the consultation interaction has been consistently found by these researchers; however, a consistent relationship between this pattern of interaction and important consultation outcomes has not been found.

Ultimately, understanding the nature of the consultation relationship is only important to the extent that it leads to positive consultation outcomes, in terms of client behavior change and consultee behavior change, satisfaction, and knowledge and skills. Additional research that addresses the nature of the consultation relationship, as it relates to consultation outcomes, is needed.

Dissertation Organization

This dissertation has been developed according to the following format:

1. General introduction
2. Two articles prepared for publication:
    a. A literature review, entitled "Request-centered relational communication within consultation: A Review"
    b. A research study entitled "An analysis of request-centered relational communication within behavioral consultation using a sample of practicing school psychologists: An Empirical Study"
3. General conclusion
4. Appendices containing additional information
5. References cited in the general introduction and general conclusion

REQUEST-CENTERED RELATIONAL COMMUNICATION WITHIN CONSULTATION: A REVIEW

A paper prepared for submission to the Journal of Educational and Psychological Consultation

Tracey L. Johnson

INTRODUCTION

My intention in this literature review is to provide an overview of school-based consultation and to establish a context for my study. While reviewing the literature, I discovered that additional research is needed regarding the interpersonal processes that occur during consultation and the nature of the relationship between the consultant and consultee. Although previous studies have been conducted in this area, they have involved student consultants rather than practitioners and have not focused attention on student outcomes. Consequently, these studies are inconclusive and they have called for more research incorporating, among other elements, practitioners rather than students as consultants. Further, a debate continues between researchers who believe that the consultation relationship should be a collaborative endeavor and those researchers who believe that consultation is more accurately described as an interpersonal influence process where the consultant directs the consultation process.

In this review, five consultation-related topics will be discussed. First, consultation will be defined, the core characteristics of consultation will be described, and the general goals of consultation will be delineated. Second, the three main models of consultation (i.e., behavioral, mental health, and organization development) will be described. Third, an overview of the debate regarding whether or not consultation is a collaborative endeavor will be provided. Fourth, the contributions of relational communication and theories of social power to consultation will be addressed. Finally, consultation research findings, the limitations of previous research, and future directions for research will be discussed.

Studies investigating the interpersonal exchanges between consultants and

consultees will be the focal point of this review. These studies will be broken down into those that focus on the verbal content and those that focus on the relational aspects of the consultation interactions. The findings of this research will be summarized and related to the research study that follows this literature review.

DEFINITION, CHARACTERISTICS, AND GOALS OF CONSULTATION

Recently, the focus of school psychological service delivery increasingly has been on consultation. The field of consultation, influenced by psychiatry, psychology, social work, and education, provides an effective and efficient way to address the psychoeducational and social problems of clients (Zins, Kratochwill, & Elliott, 1993).

School-based consultation has received strong support from school professionals. School psychologists identify consultation as one of their most preferred roles (Gutkin & Curtis, 1982) and want to spend more time in consultation (Costenbader, Swartz, & Petrix, 1992; Reschly & Wilson, 1995), while teachers and administrators view consultation as one of the most important services that school psychologists can provide (Curtis & Zins, 1981). Teachers who have been exposed to consultation report that they value the process of consultation and place high priority on working with consultants (Gutkin, 1980).

Consultation provides a process for teacher empowerment and creates a social structure within schools to support teacher learning, functioning, and renewal (Witt & Martens, 1988). Many have presumed that as consultation is practiced over time teacher referral rates will decrease because consultation produces increased teacher skills which can be used to resolve at least some problems without referral to psychological services (Conoley & Conoley, 1982a; Gutkin, 1980; Gutkin, Singer, & Brown, 1980).

Definition of Consultation

Various meanings are associated with consultation (Reschly, 1976; West & Idol, 1987). Consultation has been used as a general term and has been applied to a variety of activities. Thus, there is a need to identify the defining characteristics so that consultation

can be understood and differentiated from other activities (West & Idol, 1987).

General Meanings of Consultation

According to Kurpius and Robinson (1978), the term consultation has at least three general meanings. In the medical field, consultation refers to the practice of a doctor requesting and receiving expert advice from a colleague (Bindman, 1966; Caplan, 1964). In the organization literature, consultation refers to the application of social technology and knowledge by a change agent, typically a behavioral scientist, who engages in collaborative problem-solving with the client system in order to effect change at the system level (Argyris, 1962; Bennis, 1966, 1969; Schein, 1969). Finally, in the field of mental health, consultation refers to the process of a consultant assisting another professional, the consultee, to provide services and interventions to a client for whom the consultee is responsible (Tharp, 1975; West & Idol, 1987).

There is no definition of the term "consultation" that is universally agreed upon by practitioners and researchers. In fact, the term "consultation" has been loosely defined as a generic activity that has been applied to various psychological practices, including assessing and diagnosing, providing training for faculty, discussing personnel problems with principals, and planning research projects (Bergan, 1977; Gutkin & Curtis, 1990; Medway, 1979, 1982; Pryzwansky, 1986; Reschly, 1976; West & Idol, 1987).

Despite this lack of consensus, Reschly (1989) defines consultation as an indirect, collaborative problem-solving endeavor involving a consultant and consultee who develop a plan to resolve a problem exhibited by a third person, the client. Rather than working directly with the student (i.e., client), as in the traditional system of service delivery, psychologists using a consultation approach interact primarily with teachers and parents (i.e., consultees), who work directly with clients (Gutkin & Curtis, 1990).

Similarities and Differences Between Consultation and Counseling

According to Zins, Curtis, Graden, and Ponti (1988), the focus on work-related concerns of consultees differentiates consultation from other professional functions, such as counseling. Consultation and counseling are also different in a number of ways. Counseling is based on a hierarchical relationship between client and counselor (Zins et al., 1988), whereas consultation is commonly regarded as involving a nonhierarchical relationship between the consultant and consultee. Further, counseling involves direct service to the person seeking assistance (Reschly, 1976; Zins et al., 1988), while consultation involves an indirect form of service delivery (Reschly, 1976). Further, the purpose of counseling is to bring about personal change in the client (Zins et al., 1988) through the restructuring of maladaptive personality structures (Caplan, 1970). Consultation, on the other hand, does not focus on the personal feelings of the consultee or client (Zins et al., 1988) and supports existing personality structures (Caplan, 1970). In addition, consultation focuses on the remediation and or prevention of specific problems, while counseling focuses on helping the client take personal responsibility for problems (Caplan, 1970). Consultants and counselors also differ in the types of verbalizations they use. For example, consultants use more restrictive verbalizations (e.g., directions, suggestions, leading questions) than counselors who are more likely to use indirect techniques such as reflecting feelings (Henning-Stout & Conoley, 1987).

There are also similarities between consultation and counseling. First, both consultation and counseling are helping processes in which the consultant/therapist rely on social influence to bring about change in another person. Second, both involve the application of psychological principles. Further, consultee's/client's perceptions of the consultant's/therapist's expertise, interpersonal characteristics, and motives influence the amount of change that occurs as a result of consultation/counseling (Hughes, 1992).

Characteristics of Consultation

A number of common elements of consultation have been identified by Gutkin and Curtis (1990). The delineation of these common elements aids in the operationalization of the consultation process. The most prominent common element that can be used to define consultation is its identification as an indirect form of service delivery.

Since consultation is an indirect form of service delivery, which requires consultants and consultees to work together to help clients, the establishment of a collaborative relationship between the consultant and consultee is often identified as another critical characteristic of consultation (Babcock & Pryzwansky, 1983; Conoley & Conoley, 1982b; Curtis & Watson, 1980; Gutkin & Curtis, 1990; Zins et al., 1988). Further, the relationship between the consultee and consultant is generally conceptualized as open, trusting and voluntary in nature. The active involvement of the consultee in all aspects of the consultation process, including the definition of the problem and the development, implementation, and evaluation of treatment plans, also is a key ingredient for success (Gutkin & Curtis, 1990; Zins et al., 1988). The active involvement of the consultee in the consultation process results in consultees gaining an increased understanding of the client's problem and increases consultee ownership of and commitment to the planned intervention (Zins et al., 1988).

Confidentiality also is an important element in successful consultation (Conoley & Conoley, 1982b; Gutkin & Curtis, 1990; Zins et al., 1988). Confidentiality in consultation is consistent with the ethical guidelines of psychology and facilitates open, honest communication. It is critical for consultants and consultees to agree on which aspects of the consultation relationship are public and which are private (Gutkin & Curtis, 1990).

Another core feature of the consultation process that has been identified by Gutkin and Curtis (1990) concerns the power structure of the consultant-consultee relationship. Although many authors suggest that a successful consultation relationship is collegial,

nonhierarchical, egalitarian, and collaborative (Babcock & Pryzwansky, 1983; Bergan & Kratochwill, 1990; Conoley & Conoley, 1982b; Fine, Grantham, & Wright, 1979; Gutkin & Curtis, 1990; Hughes, 1992; Parsons & Meyers, 1984; Reschly, 1976,1989; Wenger, 1979; Zins et al., 1988), others have suggested that the consultation relationship is cooperative in nature in that the consultant guides the consultee through the consultation process in order to achieve success (Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990; Martin, 1978; Witt, Erchul, McKee, Pardue, & Wickstrom, 1991).

Typically, consultation in the schools is conducted on an individual case basis with a teacher or parent consultee for the purpose of addressing the problems of an individual child or a small number of children (Bergan, Feld, & Swarner, 1988); however, in some instances an entire class or school has served as the client (Zins et al., 1988). Teachers serve as consultees more often than parents or administrators (Martin & Meyers, 1980). Traditionally, consultation has been widely applied to mildly handicapped children and to some moderately handicapped children as well as to low achieving children (West & Idol, 1987). Most consultation research is done in elementary schools (Alpert & Yammer, 1983; Mannino & Shore, 1975) with the primary goal of the remediation of academic or behavioral problems (Alpert & Yammer, 1983).

Goals of Consultation

Although the goals of consultation vary by model (see later section), most school-based consultation is utilized for the purposes of the remediation of presenting problems and the prevention of problems by increasing consultees' skills (Gutkin & Curtis, 1990; Zins et al., 1988). Remediation refers to helping consultees resolve current problems, while prevention involves increasing consultees' problem-solving skills and psychological knowledge so that they can work more effectively with students in the future. Most of the available consultation research has focused on the remediation rather than the prevention of client problems. Thus, most of the consultation research literature examines the extent to

which consultants were able to bring about behavioral and attitudinal changes in clients and consultees as a result of consultation (Gutkin & Curtis, 1990).

There is limited research available regarding the preventative outcomes of consultation; however, this research base is growing and the available information supports the preventive efficacy of consultation (Gutkin & Curtis, 1990). Prevention services and activities are hard to document and, thus, create somewhat of an accountability problem for school districts. Unlike traditional special education services (i.e., refer-test-place) where school psychologists can specify how many children were tested, labeled, and placed in special education, prevention services often do not leave as much formalized evidence of the services provided and the outcomes of those services (Piersel & Gutkin, 1983).

Another major goal of consultation is to increase consultees' knowledge so that they can become more effective professionals and solve their own problems in the future (Sandoval, Lambert, & Davis, 1977). Consultation also emphasizes techniques to improve consultee skills and attitudes, interpersonal causes of difficulties, and prevention of problems (Medway & Updyke, 1985). A key assumption of consultation is that consultants add to consultees' knowledge and skills in dealing with clients and, that after the termination of consultation, consultees are expected to independently apply their knowledge and skills to other students who have similar problems (Erchul, 1987).

MODELS OF CONSULTATION

According to Gutkin and Curtis (1982), Reschly (1976), Zins et al. (1988), and Zins and Erchul (1995), the three models of consultation most frequently used in school psychology practice are: a) Behavioral (Bergan, 1977; Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990); b) Mental Health (Caplan, 1970); and c) Organization Development (Schmuck, 1990; Schmuck & Miles, 1971). While these models differ substantially in theoretical orientation, methods of intervention, and roles and relationships of consultees and consultants, they have a number of elements in common. For example,

all of these models use a problem-solving process to develop interventions, emphasize work-related problems, and view participation in the process as voluntary (Zins & Erchul, 1995). Although the stages or steps in problem-solving may vary in number, the same general pattern of problem-solving remains consistent across various models (Zins et al., 1988). Further, regardless of the model used, a major goal of consultation has been to improve the professional functioning of the consultee (Gutkin, Henning-Stout, & Piersel, 1988). The adoption of one of these models over the others, however, determines whether treatments will be directed at consultees, clients, or an entire organization or system and whether the effectiveness of consultation will be determined through behavioral assessment alone or through the collection of affective and attitudinal measures also (Medway, 1982).

Behavioral Consultation

Behavioral consultation (BC) is based on the principles of applied behavior analysis and behavior therapy and has its roots in behaviorism (i.e., Skinner) and social learning theory (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990; Reschly, 1976). In behavioral consultation, client and consultee problems are conceptualized from a learning perspective. Thus, a child's failure to perform adequately in the instructional environment is due to environmental events in the instructional setting (Bergan & Kratochwill, 1990). Due to widespread dissatisfaction with the traditional model of school psychological service delivery and the documented effectiveness of behavioral approaches, explicit behavioral consultation procedures have been developed (Reschly, 1976).

An assumption underlying behavioral consultation is that the root of a child's problem lies in the setting in which it occurs (Tombari & Davis, 1979). Thus, in behavioral consultation, some of the responsibility for a child's problem is shifted away from the child onto the consultee (Piersel & Gutkin, 1983). Thus, it is assumed that consultees will have to change their own behavior or the environment in order to resolve the client's problem (Bergan & Kratochwill, 1990). The primary goal of behavioral consultation is to change

the behavior of the client by developing and implementing specific intervention plans with consultees (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990; Reschly, 1989; Tombari & Davis, 1979). A secondary goal of behavioral consultation often is to change the organization (i.e., the school environment) in which the client and consultee interact. Producing long-term positive changes in the consultee, by increasing skills and knowledge is a third goal of behavioral consultation (Bergan & Kratochwill, 1990).

Roles and Responsibilities

Consultants have three main roles and responsibilities within behavioral consultation. First, consultants must establish the stages of consultation, be experts on the process of consultation (Bergan & Kratochwill, 1990; Gutkin & Curtis, 1990), and lead or guide the consultee through the problem-solving process (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975; Gutkin & Curtis, 1990). To do this, consultants must exert some control over the consultee, generally by asking questions and making requests of the consultee (Bergan & Kratochwill, 1990). Second, consultants share psychological and educational knowledge with consultees (Bergan & Kratochwill, 1990; Gutkin & Curtis, 1990). Third, consultants provide or assist the consultee in providing services that will be beneficial to clients, such as behavioral interventions and curricular modifications (Bergan & Kratochwill, 1990).

The verbal interaction that occurs during the consultation process is largely under the control of the consultant, who directs the course of consultation by the questions that he/she asks and the directions that he/she gives to the consultee. Consultants generally do this in a way that makes them appear collaborative and nondirective by eliciting goals and priorities and offering suggestions, rather than by telling the consultee what to do (Tombari & Davis, 1979).

Consultees have three main roles and responsibilities within the behavioral consultation interaction. First, the consultee is responsible for specifying or describing the

client problem that prompted the consultee to seek consultation (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975), as well as content knowledge related to the problem, such as curriculum and teaching style variables (Gutkin & Curtis, 1990). Second, consultees are responsible for implementing recommendations that emerge during consultation (Hughes, 1992), evaluating treatment outcomes and making decisions about data collection and intervention implementation (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975). Third, consultees are responsible for working with clients, during data collection and intervention implementation (Bergan & Kratochwill, 1990; Gutkin & Curtis, 1990).

Clients have two responsibilities in behavioral consultation. The first responsibility is to change in the direction of the goal that the consultant and consultee have established during consultation. The second responsibility of clients is to participate in establishing the goals of consultation and in designing and implementing interventions to meet these goals, as requested by consultant and consultee (Bergan & Kratochwill, 1990).

Stages of Behavioral Consultation

There are four stages in the behavioral consultation process: a) problem identification; b) problem analysis; c) plan implementation; and d) problem evaluation. Each of these stages involves a structured interview, except for plan implementation, in which specific objectives must be achieved before the consultant and consultee may proceed to the subsequent stage. These stages specify the steps required to move from the initial description of the problem to the design and implementation of an intervention to solve the problem and, finally, to a determination of whether or not the problem has been resolved (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975).

Problem Identification. Problem identification involves the specification of a problem to be resolved. A problem is defined as a significant discrepancy between observed behavior and desired behavior in terms of its frequency, intensity, or duration

(Bergan & Kratochwill, 1990; Witt & Elliott, 1983). Problem identification is accomplished through a problem identification interview (PII) which lays the groundwork for establishing the discrepancy between observed behavior and desired behavior. In the PII the consultant assists the consultee to define in objective, observable, and measurable terms the behavior to be changed as a result of consultation. Also, the consultant and consultee determine a procedure which the consultee will use to measure the current status or baseline level of the behavior of concern (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975).

According to Gutkin and Curtis (1982), problem identification may appear to be simple, but in fact, it is potentially the most difficult part of consultation. Erroneous problem identification may be the greatest barrier to effectively helping others to deal with problem situations (Lazarus, 1973) and may result in the consultation relationship coming to an end (Tombari & Davis, 1979).

Problem Analysis. Problem analysis involves the validation of the problem, identification of variables which might be related to problem maintenance and might facilitate problem resolution, and the development of an intervention to solve the problem. Problem analysis is achieved through a problem analysis interview (PAI). During the PAI the consultant and consultee specify the discrepancy between desired performance and observed performance and identify the desired level of performance. The consultant and consultee also discuss the skills of the client and the conditions in the school environment that might be related to the achievement of a solution to the problem. Based on this discussion, the consultant and consultee develop an intervention to solve the problem. The previous procedure for measuring client behavior of concern, during the PII, is then reconfirmed (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975).

Plan Implementation. During the plan implementation phase of behavioral consultation, the consultee implements the intervention designed during the PAI. The consultee also continues data collection so that the consultant and consultee can compare baseline data and intervention data in order to determine the effectiveness of the intervention. During intervention implementation, the consultant's task is to insure that the consultee is able to implement the intervention as designed. In order to accomplish this task the consultant checks with the consultee during intervention implementation to see if any unforeseen problems have arisen and to insure that there is agreement between the implementation procedures and the intervention designed during the PAI (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975).

Problem Evaluation. In problem evaluation the consultant and consultee determine whether or not the problem has been solved and whether or not the plan is effective. Problem evaluation is accomplished through the problem evaluation interview (PEI). During the PEI, the consultant and consultee compare data collected during the intervention phase to the baseline data and the level of desired performance specified in the PAI. If the goal specified in the PAI has been achieved, consultation may terminate. If the goal has not been achieved or other problems have developed, then further problem analysis is undertaken and a new plan is developed. Further, if there has been little or no progress toward the goal after the implementation of one or more interventions, the feasibility of attaining the original goal may be questioned and a new goal delineated. Whether or not the goal has been attained, the consultant and consultee should determine the effectiveness of the intervention by comparing data collected before intervention implementation and after intervention implementation. During the PEI, the consultant and consultee decide whether to discontinue an intervention, to keep it in place, or to change the intervention in some way (Bergan & Kratochwill, 1990; Bergan & Tombari, 1975).

This four stage behavioral consultation sequence is necessary in order to move from

the identification of the problem to the development and implementation of a treatment designed to solve the problem. The end result of the four stage process is the evaluation of goal attainment and treatment effectiveness (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990). In behavioral consultation, consultees assume the primary role of assessment and intervention, while consultants take responsibility for guiding consultees through the stages of consultation (Kratochwill, 1985).

Behavioral consultation appears to be one of the most frequently taught, practiced, and researched consultation models (Alpert & Yammer, 1983; Costenbader et al., 1992; Gresham & Kendell, 1987; Gutkin & Curtis, 1982). According to Medway (1979), behavioral consultation has been subjected to some of the most stringent experimental controls. Further, the greatest empirical support exists for behavioral consultation (Medway, 1979). Behavioral approaches to consultation are data based and, in contrast to less data-based consultation approaches, it is possible to evaluate effectiveness (Alpert & Yammer, 1983).

Teachers and school psychologists generally show a preference for behavioral consultation over other consultation models. For example, when teachers were asked to rate videotapes of initial consultation interviews, they viewed behavioral consultation as more effective than mental health consultation (Medway & Forman, 1980). Further, teachers who participated in behavioral consultation had higher expectancies regarding their ability to teach a child with academics problems than teachers who participated in mental health consultation (Bergan, Byrnes, & Kratochwill, 1979). Teachers given behavioral cues in consultation expressed more optimism about being able to solve problems in the classroom than those given medical model cues (Tombari & Bergan, 1978).

Mental Health Consultation

Mental health consultation (MHC) is one of the most widely recognized models of consultation, especially within the field of clinical psychology. MHC has its theoretical roots

in psychoanalysis and personality theory, specifically the psychodynamic formulations of personality. MHC was developed with an emphasis on prevention rather than the treatment of mental illness (Caplan, 1970). Prevention through early identification and the improvement of the social and emotional environment was seen as more effective than the treatment of serious problems (Caplan, 1970). The primary focus of MHC is on changing consultees' attitudes and perceptions, which are believed to interfere with consultees' ability to work objectively with clients (Gresham & Kendell, 1987).

According to Caplan (1970), consultee lack of knowledge, skills, confidence, and objectivity are the four most common reasons for work related problems that require consultation. Caplan (1970) hypothesized that most consultation cases result from consultee lack of objectivity; however, there have not been any investigations of the relative frequency with which consultants encounter each of these four reasons for work related problems . Gutkin (1981) found, however, that more consultation cases resulted from consultee lack of knowledge, skill, and confidence rather than from lack of objectivity. Thus, school psychologists should not make the assumption that consultees who seek consultation are experiencing problems due to a lack of objectivity. Mental health consultation, which focuses so heavily on consultee objectivity and techniques of theme interference reduction, may be less practical and useful for school psychologists than was previously believed. In fact, the psychodynamic nature of mental health consultation may not provide school psychologists with a functional framework from which to develop effective interventions for most of the consultee and client difficulties that they encounter. The best way to address consultee lack of knowledge, skills, and confidence would seem to be problem solving, behavior analysis, and communication skills (Gutkin, 1981).

The prominent goal of MHC is to help consultees gain insight into abnormal emotional development and personality dynamics. This increased affective understanding is assumed to result in improved emotional adjustment in teachers and healthier learning

environments for children. Further, in MHC consultants help consultees become more sensitive to, and understanding of, their own feelings and the feelings of others. According to Medway and Updyke (1985), mental health is the preferred model of consultation when consultee emotional adjustment change is the goal of consultation.

According to Conoley and Conoley (1982a), mental health consultation requires a very high level of skill from consultants. Mental health consultants must become experts in the organizational, interpersonal, and intrapersonal variables of consultees. Often, mental health consultants must walk a thin line between therapy and consultation.

Organization Development Consultation

Organization development consultation (ODC) has its roots in the field theory of Lewin (1976) and the social psychological systems theory delineated by Katz and Kahn (1978). ODC has been historically applied in business and industry and used extensively by industrial and organizational psychologists. ODC also has been used occasionally in school settings (Kratochwill & Bergan, 1990; Reschly, 1976; Schmuck, 1990; Schmuck & Miles, 1971; Schmuck & Runkel, 1988).

The focus of ODC is on changing behavior at the system level by improving communication and feedback within the entire system (Gresham & Kendell, 1987). Thus, ODC deals with relationships within schools or school districts and between schools or school districts and the environment (Schmuck, Runkel, Saturen, Martell, & Derr, 1972). The focus of intervention techniques utilized by ODC is generally on group processes and the procedures used include group sessions to improve communication, to negotiate goals, and to reduce and resolve conflict. ODC involves the participation of the school staff in the active assessment, diagnosis, and transformation of their own organization (Schmuck, 1990; Schmuck & Runkel, 1988). In ODC the consultant's role is to facilitate the session activities and the development of group process skills (Kratochwill & Bergan, 1990; Schmuck & Miles, 1971).

The primary goal of ODC is to improve the functioning of schools and other organizations so that they can effectively utilize their resources when making necessary changes and solving problems. Further, through ODC, participants establish norms, structures, and procedures for problem solving about innovations that will lead to excellence in education (Schmuck, 1990; Schmuck & Runkel, 1988). Further, the ultimate outcome of ODC is the establishment of an instrument for self-perpetuating change, which aids the system to function effectively (Kratochwill & Bergan, 1990; Schmuck & Miles, 1971; Reschly, 1976).

COLLABORATION AND COMMUNICATION

Collaboration

Currently, a debate exists among researchers and practitioners regarding the nature of the relationship between consultants and consultees. While most argue that consultation should be viewed as involving a collaborative, nonhierarchical relationship (Babcock & Pryzwansky, 1983; Caplan, 1970; Gutkin & Curtis, 1990; Idol, Paolucci-Whitcomb, & Nevin, 1986; Parsons & Meyers, 1984; Reinking, Livesay, & Kohl, 1978; Reynolds, Gutkin, Elliott, & Witt, 1984; Sheridan, 1992; Tyler, Pargament, & Gatz, 1983; Zins et al., 1988), others have argued that consultation should be viewed as an interpersonal influence process in which the consultant directs or guides the consultation process toward successful outcomes (Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990; Erchul & Raven, 1997; Noell & Witt, 1996; Witt, 1990a, 1990b; Witt et al., 1991). This debate is unresolved and shows a need for more research.

Support for Collaborative Position

Empirical and theoretical arguments have been mounted in the defense of the collaborative position (Babcock & Pryzwansky, 1983; Erchul, 1992; Morrison, Walker, Wakefield, & Solberg, 1994; Sheridan, 1992; Tyler, Pargament, & Gatz, 1983). A number of authors (e.g., Caplan, 1970; Gutkin & Curtis, 1990) and studies (Babcock &

Pryzwansky, 1983; Morrison et al., 1994; Reinking, Livesay, & Kohl, 1978) have contributed to the adoption of the view that collaboration is an important part of consultation. Researchers have found that teachers prefer the collaborative approach to consultation (Babcock & Pryzwansky, 1983; Fine et al., 1979; Pryzwansky & White, 1983; Wenger, 1979), perceive the collaborative consultant as being more attentive to their needs, and the process as resulting in the development of more successful interventions (Wenger, 1979).

Support for Directive Position

Empirical and theoretical arguments have also been mounted in defense of the directive nature of consultation. Noell and Witt (1996) argued that the co-equal status of consultants and consultees implied by collaborative view of the consultation relationship serves to devalue any expert content knowledge that the consultant has because this would create an unequal relationship. Erchul (1987) and Witt et al. (1991) found that teachers exposed to consultants during behavioral consultation were more satisfied with the consultation experience when the consultant controlled or directed the course and nature of the consultation interaction. Further, Wickstrom (1995) found no differences in either teacher satisfaction or treatment integrity as a function of the consultant behaving in an expert or collaborative fashion. Erchul, Covington, Hughes, & Meyers (1995) also found that positive outcomes (e.g., consultee satisfaction with consultation) result from school-based behavioral consultation when the consultee follows the interview direction established by the consultant rather than trying to initiate a new direction. Further, Erchul and Chewning (1990) found that positive consultation outcomes, such as ratings of consultee willingness to collect baseline data and consultee willingness to implement treatment plans, resulted when consultees cooperated with consultants by accepting consultant's requests. Erchul and his colleagues (e.g., Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995; Witt et al., 1991) have concluded that effective consultants tend

to exercise control over the consultation process by asking questions, offering directives, and initiating topic changes and have found consultant measures of control to be positively related to consultation outcomes. Based on these findings, teacher preference and consultation outcomes appear to support an interactional style where consultants exercise a greater degree of control, by asking questions, offering directives, and initiating topic changes, during consultation than consultees (Witt, 1990b).

The Debate Continues

There are so few data in support of either a hierarchical relationship or a collaborative relationship in consultation that it is undetermined at this point which type of relationship results in the best outcomes (Witt, 1990b). Further, the studies which have documented consultee preferences for collaborative consultation relationships have not been based on the actual practice of consultation but instead have involved the use of analogue procedures (Erchul & Chewning, 1990). Clearly, there is a need to further define collaboration and noncollaboration (Witt, 1990b) and for additional research investigation of the consultation relationship (Gutkin, 1993; Witt, 1990a). The actual nature of the relationship between consultants and consultees remains unknown and the debate among researchers on this subject continues. The study that follows this literature review will shed light on this debate by investigating further the nature of the consultation relationship and its relationship to consultation outcomes.

Relational Communication

Many professionals in the field of consultation view consultation as an interpersonal influence process (e.g., Caplan, 1970; Erchul & Raven, 1997; Hughes, 1992; Parsons & Meyers, 1984). Thus, consultants are only successful to the degree that they are able to influence consultees to adopt more effective educational strategies and practices (Hughes, 1992). Bateson's (Bateson, 1958) theory of relational communication provides a framework for understanding how consultation can be a directed influence process.

Definition of Relational Communication

Relational communication, a branch of communication research, has its origins in the field work of Gregory Bateson, an anthropologist. Bateson's theories have significantly influenced the study of interpersonal communication, especially in the study of marital and family functioning (Millar & Rogers, 1976, 1987). "Relational communication refers to the control aspects of message exchange-those elements of message exchange by which interactors reciprocally define the nature of their relative "position" or dominance in their interaction" (Rogers & Farace, 1975, p. 222). Relational communication emphasizes the analysis of a) communication processes instead of the verbal content of messages, b) paired sequential messages or transactions rather than single messages, and c) changes in the nature of these messages over time (Millar & Rogers, 1976).

A key principle of relational communication research is that all verbalizations consist of content and relational characteristics (Bateson, 1958). Content involves what is being said (i.e., the information being conveyed), while relational characteristics involve how it is being said (i.e., defines the nature of the relationship between the speakers) (Rogers & Farace, 1975). According to Millar and Rogers (1987), an assumption of relational communication is that interpersonal relationships are based on emergent patterns of interaction that are constantly co-defined by the participants. Further, "Functionally, the communication process is largely a negotiation process whereby persons reciprocally define their relationships and themselves" (Millar & Rogers, 1976, p. 88).

Communication and Defining Relationships

Since communication is an attempt to define a relationship (Bateson, Jackson, Haley, & Weakland, 1956; Haley, 1963), the characteristics of messages that define or redefine relationships are studied by relational communication researchers. As two people define their relationship with each other, they must work out together what kind of communication behavior is to take place in their relationship, as well as who is to control

what takes place in the relationship. Every message from one person to another tends to define the kind of interchange that is to take place between them. When one person communicates a message to the other, he/she is by that act attempting to define the relationship and the other person must then decide whether to accept or reject the other's attempt at control. Maneuvers to define a relationship consist of a) requests, commands, or suggestions about what another should do, say, think, or feel and b) comments on another's communicative behavior (Haley, 1963).

All possible types of communication behavior between two people can be classified into two basic categories: a) symmetrical and b) complementary. In the symmetrical category, the two people exchange the same type of behavior. Thus, they emphasize their symmetry with each other and the relationship is equalized through equivalent behavioral exchanges. Complementary communicative behavior is characterized by relational exchanges that are dissimilar in terms of control. The two people in a complementary situation exchange behavior that complements or fits together (e.g., one gives, the other takes). Thus, one is in a position of superiority while the other is in a subordinate position in the complementary type (Bateson, 1958; Haley, 1963).

Transactional Dimensions of Relationships

Three transactional dimensions of relationships have been proposed by Millar and Rogers (1976, 1987). These dimensions are: trust, intimacy, and control. The trust dimension refers to aspects of communication that are concerned with predictions of the future behavior of persons in the relationship. Although these predictions are future-oriented, they are based upon inferences drawn from past behaviors (Millar & Rogers, 1987).

The intimacy dimension is concerned with attachments or the degree to which individuals use each other as a source of self-confirmation and the affective evaluation of the self-confirmation. Thus, this dimension is more relevant to personal relationships than

professional relationships. Further, this dimension is the most subjective of the three because it is primarily based on perceptions rather than observable behaviors (Millar & Rogers, 1976).

The control dimension has been studied more than the other dimensions and is concerned with who has the authority to direct, define, and delimit the relationship. The right to define the relationship varies over situations and content areas. Thus, the control dimension is dynamic because the right to define the relationship is constantly negotiated based on changing internal and external conditions. The pattern of control is defined by both parties in the relationship (Millar & Rogers, 1976).

According to Millar and Rogers (1987), there are three measures of the control dimension: redundancy, dominance, and power. Redundancy refers to the variability in persons negotiation over the right to define the relationship. Thus, the more redundant the system's interactions within and across topics and contexts, the more rigid the control pattern; and the less redundant the interactions, the less rigid the control pattern (Millar & Rogers, 1987). Dominance involves transactions in which one person's attempts at defining the relationship are accepted by the other. Power refers to the power to influence or constrain another's behaviors (French & Raven, 1959; Olson & Cromwell, 1975). The control dimension is perhaps the most applicable to consultation.

Relational communication researchers have developed coding systems that have been used to analyze control in communication (e.g., Folger & Puck, 1976; Rogers & Farace, 1975). These coding schemes have provided a methodology for operationally defining control and for studying the relationship between consultation process and consultation outcomes.

Social Power

According to French and Raven (1959), the phenomenon of power and influence involve a dyadic relationship between two agents. Power, which has been studied by

various disciplines, is one of the most fundamental aspects of all types of social interaction (Olson & Cromwell, 1975). Raven (1965) defined social influence as "change in a person's cognition, attitude, or behavior, which has its origin in another person or group" (p. 371). Olson and Cromwell (1975) defined control, or influence, as the number of effective attempts which an individual makes that actually change the behavior of others. Power, on the other hand, was defined as the potential or actual ability of an individual to influence the behavior of another (Olson & Cromwell, 1975; Raven, 1965). Influence may be either positive or negative depending upon whether its effects are consistent or inconsistent with the intentions of the influencing agent (Raven, 1965).

French and Raven's Five Bases of Power

French and Raven (1959) proposed the following five bases of power, resources which an influencing agent can use in attempting to change the attitudes, beliefs, or behaviors of another: legitimate power, coercive power, reward power, expert power, and referent power. A sixth type of power, informational power, was added by Raven (1965). Reward power has its basis in the ability to reward another for desired behavioral change. Coercive power stems from the expectation on the part of one person that he/she will be punished by another person if he/she fails to change his/her behavior in conformance with the influence attempt. Legitimate power is defined as the power which stems from internalized values in a person which dictate that another person has a legitimate right to influence him/her and that he/she has an obligation to accept this influence. The bases for legitimate power include: age, intelligence, social class or caste, and physical characteristics. Referent power has its basis in the identification (i.e., a feeling of oneness with another) or attraction of one person with another. The stronger the identification, the greater the attraction, and hence the greater the referent power. Expert power is based on the perception of one person that another has superior knowledge or skills within a specific area (French & Raven, 1959). Variables such as age, social status, educational level, and experience all

contribute to expert power (Parsons & Meyers, 1984). Informational power, or persuasion, is based on the content of a communication, or logical argument, that one person can present to another in order to effect change (Raven, 1965, 1992).

Social Power and School Consultation

According to Martin (1978), although the concepts of persuasion, power, and influence rarely have been directly addressed in the school psychology literature, they provide an important conceptual framework for increasing the competence of school psychologists. The avoidance or negative reaction toward the concepts of power and influence stems mostly from the failure to understand the nature of the types of power available to school psychologists (Martin, 1978). According to Parsons and Meyers (1984), referent, expert, and informational power are appropriate for a collaborative model of consultation. Martin (1978) and Hughes (1992) also identified expert and referent power as legitimate forms of power to be used during consultation. Expert power is in operation whenever one person seeks help from another. Persons generally seek help from another whom they perceive to have expertise in the area of the problem. Referent power is in operation whenever one person perceives that another person manifests feelings, beliefs, and behaviors which are similar to his/her own or which he/she would like to possess (French & Raven, 1959; Martin, 1978).

In the consultation literature, more attention has been devoted to referent power than expert power, even though both can facilitate social influence (Hughes, 1992). The notion of referent power (e.g., collegial and voluntary relationships) is pervasive in the consultation literature (Parsons & Meyers, 1984). The most influential persons have more than one source of power available to them (Martin, 1978).

According to Parsons and Meyers (1984), reward, coercive, and legitimate power are not appropriate for a collaborative model of consultation, nor are they at the disposal of school psychologists (Martin, 1978). In contrast, Erchul and Raven (1997) proposed that all

six social power bases (coercive, reward, legitimate, expert, referent, and informational), are available to school psychologists and play an important role in the consulting process.

The study of social power in consultation has been a relatively recent phenomenon. Erchul and colleagues have begun to study the relationship between social power and outcomes in school-based consultation; however, much remains to be learned about the nature of social power in the practice of school-based consultation.

CONSULTATION RESEARCH

Although several literature reviews and meta-analyses have documented that consultation is an effective form of service delivery to children and youth in school settings (Mannino & Shore, 1975; Medway, 1979; Medway & Updyke, 1985), little is known about which variables influence consultee use of school-based consultation.

The following consultee variables have been studied: a) age, b) years of experience, and c) locus of control. The relationship between these consultee variables and the use of consultation have been inconsistent. Research literature on teacher attitudes toward the use of consultation has indicated that age and experience of teachers are factors in whether or not teachers use of consultation; however, research results have produced conflicting results regarding whether more experience leads to increased or decreased preferences for consultation services (Baker, 1965; Bossard & Gutkin, 1983; Gilmore & Chandy, 1973; Iscoe, Pierce-Jones, Friedman, & McGehearty, 1967; Stenger, Tollefson, & Fine, 1992). Consultant skill, on the other hand, has been shown to be predictive of consultee use of consultation (Bossard & Gutkin, 1983).

Four characteristics of effective consultants have been identified in the research literature. First, effective consultants use the communication skills of empathy, genuineness, active listening, and paraphrasing when interacting with consultees (Gutkin, 1986; Gutkin & Curtis, 1990). Second, consultants who are effective use layperson terms and language instead of psychological jargon (Witt, Moe, Gutkin, & Andrews, 1984).

Further, effective consultants encourage teacher involvement in intervention development (Bergan & Neumann, 1980; De Forest & Hughes, 1992). Finally, consultant relationship and problem solving skills have been shown to be critical to consultation success (Hughes & De Forest, 1993; Knoff, Hines, & Kromrey, 1995).

The Consultation Relationship

In the past, behavioral consultants have not focused on the importance of the consultation relationship (Kratochwill & Van Someren, 1985). Results of investigations of direct interventions suggest that the client-therapist relationship plays an important role in treatment effectiveness (Goldfried & Davison, 1976, 1994; Wilson & Evans, 1977). The following factors were found by Morris and Magrath (1983) to influence the therapeutic relationship: a) expectancy, including the client's or consultee's expectation of a positive outcome as a result of therapy or consultation; b) imitation, which involves structuring the consultation in such a way that the consultee acts more like the consultant; c) general personality characteristics; d) treatment history; and e) interactional style. In addition, therapist (i.e., consultant) variables are known to influence the effectiveness of therapy. These include: a) consultant modeling of treatment techniques for consultees or interacting with consultees in the classroom, b) consultant's physical location in relation to the consultee and contact with the consultee, c) consultant warmth and concern for the client and consultee (Goldfried & Davison, 1994; Rogers, 1957), d) expertise and status of the consultant (Goldstein, 1974), and e) the structure and directiveness of the consultant (Cashen, 1979; Goldfried & Davison, 1994).

Although a number of client and therapist relationship issues have been identified in the behavior therapy literature and found to be related to positive outcomes, few studies investigating these issues have been published in the consultation literature. Therefore, the influence of these relationship variables on consultation effectiveness in applied settings has not been determined. Research in this area must address many factors, such as the

interaction between therapeutic relationship factors (e.g., empathy) and treatment techniques (e.g., positive reinforcement or punishment) used in consultation. Further, it is unclear whether parents and teachers will respond similarly to comparable relationship variables. Researchers need to determine whether similar relationship enhancement factors have the same effect across diverse types of teachers and parents in the consultation process. Research in this area may further elucidate whether the nature of the therapeutic relationship is crucial to success in behavioral consultation (Kratochwill & Van Someren, 1985).

Need for Additional Interpersonal Process Research

According to various literature reviews and meta-analyses of the school-based consultation research (Alpert & Yammer, 1983; Gresham & Kendell, 1987; Gutkin, 1993; Gutkin & Curtis, 1990; Medway, 1979, 1982; Pryzwansky, 1986), there is a need for additional research on the interpersonal communication processes that occur between consultants and consultees during consultation. Recently, there has been increasing interest in the communication behaviors of consultants and consultees as they interact during school-based consultation. Several research studies focusing on interpersonal communication processes have been published (e.g., Erchul, 1987; Erchul & Chewning, 1990).

According to Erchul (1993), the field of interpersonal communication has much to contribute to our understanding of the process of consultation. There are two main approaches to investigating the interpersonal exchanges between consultants and consultees. One focuses on the verbal content of consultation interactions, such as the Consultation Analysis Record (CAR) developed by Bergan and Tombari (1975, 1976) while the other focuses on the relational aspects of the interactions, such as the Folger and Puck (1976) relational coding system, which has been applied to consultation by Erchul and his colleagues.

Research on Verbal Content

Bergan & Tombari (1975)

Bergan and Tombari (1975) have developed a consultation analysis procedure for coding the verbal statements made by consultants (e.g., school psychologists) and consultees (e.g., teachers), while discussing a third party, the client, during consultation. Consultation involves the use of the following four message categories: source (i.e., person speaking), process (i.e., function of the message), content (i.e., topic discussed), and control (i.e., gives or requests information). Consultation analysis allows for the collection of information regarding message content (e.g., student behavior, student characteristics), the process of verbal messages (e.g., evaluation, summarization), and the source of the message (consultant or consultee). Verbal statements also are coded on a control dimension as either elicitors (statements that request information or action) or emitters (statements that provide information). The control category was developed with the assumption in mind that the extent to which, as well as the manner in which, the consultant requests or provides information will have a significant influence on what the consultee says and does. The overall proportion of elicitors in the control category may be used as an index of interview control. Such that, consultants with a high proportion of elicitors are regarded as exerting a greater degree of interview control than consultants with a low proportion of elicitors. The consultation analysis procedure can be used to assess consultant effectiveness. Consultation effectiveness can be assessed in terms of a variety of indices constructed from the consultation analysis records, including overall message effectiveness, content relevancy, process effectiveness, message control, and interview focus.

Bergan & Tombari (1975) used the rationale that consultant verbal behaviors should facilitate the accomplishment of the objectives of each of the three consultation interviews (i.e., PII, PAI, PEI) in the construction of effectiveness indices. They found that behavioral interviewing skills are essential to the identification and solution of problems addressed

during consultation.

Bergan & Tombari (1976)

Bergan and Tombari (1976) investigated the extent to which a) measures of consultant efficiency, skill and flexibility in applying psychological principles, and interviewing skills predicted the occurrence of problem identification, b) consultant variables and problem identification predicted plan implementation, and c) consultant skills and efficiency, problem identification, and plan implementation predicted problem solution. Participants included 806 children in kindergarten through third grade from various ethnic backgrounds, 11 psychologists, who participated in a consultant training program, and an unspecified number of teacher consultees. Of this original sample, problem identification occurred in only 43 percent of the cases, plan implementation occurred in 31 percent of the cases, and problem solution occurred in 30 percent of the cases. However, when only those cases were included in which a plan was implemented, goal attainment was reached in 97 percent of the cases.

In this study, measures were collected on consultant efficiency, skill in applying psychological principles, and interviewing skill. Consultant efficiency was measured through determining the average time from referral to the initial consultation interview and by the size of psychologists' caseloads. Average time from referral to PII was determined by subtracting the date of referral from the date of the PII for each case as reported on case reporting forms. Skill and flexibility in applying psychological principles, an index of application skill, was defined in terms of the variety of psychological principles applied by the consultant and was calculated by tallying the proportion of time each of the various possible procedures (e.g., modeling, extinction, positive reinforcement) was used by the psychologist. Measures of consultant interviewing skill were obtained from PII and PAI interview transcripts, which were coded using the consultation analysis technique. The following four measures of interviewing skill were computed from the transcripts: a) an

index of the relevancy of interview content, b) an index of content focus, c) an index of the effectiveness of consultant verbal processes, and d) an index of message control.

Three multiple-regression analyses were performed in this study. In the first analysis, problem identification was regressed on the consultant variables and resulted in a multiple correlation of .637. The following consultation variables contributed significantly to the multiple correlation for problem identification: a) consultant efficiency, b) consultant flexibility in applying psychological principles, and c) the index of message control. In the second, plan implementation was regressed on problem identification and consultant variables, resulting in a multiple correlation of .776. Problem identification was the only variable which contributed significantly to this correlation. The third analysis involved the regression of problem solution on plan implementation, problem identification, and the consultant variables and resulted in a multiple correlation of .977. Plan implementation accounted for 95 percent of the variation in problem solution.

Measures of consultant effectiveness were predictive of problem identification, plan implementation, and problem solution. Results indicated that the consultant's interviewing skill, skill and flexibility in applying psychological principles, and efficiency had their greatest impact on problem-solving during the problem identification interview. They accounted for virtually no variation in plan implementation and problem solution. When the consultant lacked skill or was inefficient there was a substantial chance that problem-solving would never occur. The best predictor of plan implementation was problem identification. A limitation of this study is that the determination of whether or not problem identification occurred was made only by the consultant. Plan implementation accounted for most of the variation in problem solution; thus, "once consultative problem solving as defined in this article was carried through problem identification, problem solution almost invariably resulted" (Bergan & Tombari, 1976, p. 12). Based on these findings, it appears that problem identification is the most important stage in consultation.

Martens et al. (1989a)

Martens, Lewandowski, and Houk (1989a) used Bergan and Tombari's consultation analysis coding system to examine the relationship of consultant and consultee verbal behavior during the problem identification interview (PII) to subsequent perceptions. Participants in the study were 20 teacher consultees and 2 masters' level psychologists. Teachers and psychologists engaged in a 15 minute PII about a classroom problem. The verbal interaction patterns of the psychologists and teachers during the PII were coded from videotapes using the consultation analysis record (CAR). After the PII, teachers completed the Perception of Consultation Questionnaire (PCQ), a questionnaire consisting of 35 Likert items, which assessed their perceptions of the consultation interaction. The questionnaire consisted of items addressing various aspects of the interaction, including characteristics of the consultant, problem identification, consultation dialogue, and consultation in general.

Consistent with previous applications of the CAR, each independent clause during the interview was independently categorized by two different coders as having been emitted by either the consultant or the consultee (source); seeking or giving information (control), addressing one of the seven content areas or topics (e.g., background environment, student behavior); and performing one of the seven communication functions (e.g., evaluation, specification). Pearson correlation coefficients were computed between total scores on the PCQ and the following three measures of verbal behavior: a) percentages of single categories (e.g., consultant specification), b) percentages of combinations of categories (e.g., a consultant's emitting a behavior specification), and c) numbers of consultant-consultee verbal sequences (e.g., a consultee emitting an inference, followed by a consultant eliciting a behavior specification). The correlational analyses showed that consultant statements that expressed agreement with the consultee (i.e., positive validation emitters) were significantly related ($r = .54$, $p < .05$) to favorable consultee ratings of the interview on the PCQ. The sequence of consultees' statements describing behavior (i.e., behavior

specification emitters) followed by consultants' agreement with these statements (i.e., positive validation emitters) was also correlated significantly ($r = .53$, $p < .05$) with favorable consultee perceptions on the PCQ. Consultee inference emitters were also positively related ($r = .53$, $p < .05$) to consultees' perceptions of consultation on the PCQ. Thus, the more consultees were able to express their hypotheses about the causes of behavior (consultee inference emitters) and the more consultants expressed agreement with consultees' statements, the more favorable consultees' perceptions of the consultation process were.

A squared multiple correlation coefficient was also computed. The following three verbal behavior indices were entered into the prediction equation: a) consultee inference emitters, b) consultant positive validation emitters, and c) the sequence of consultee behavior specification emitters followed by consultant positive validation emitters. The regression model in which these variables were predictors accounted for 42 percent of the variance in ratings on the PCQ. This finding confirms the potency of the content of verbal interactions as process variables for consultation outcomes.

These results suggest the importance of consultee involvement in the consultation process, as reflected by consultee willingness to advance hypotheses and interpretations of the problem being evaluated. Further, consultants who agree with consultees' descriptions and interpretations of the problem were found to be more successful in obtaining consultee involvement.

Martens et al. (1989b)

Martens, Lewandowski, and Houk (1989b) investigated the effects of entry information on consultees' knowledge of consultation, verbal behavior during the PII, and perceptions of the consultation process using Bergan and Tombari's consultation analysis coding system. Participants were 20 teachers who were randomly assigned to either the experimental or control group and two school psychologists who held masters' degrees. Subjects in the experimental group viewed a videotape which discussed various issues

regarding entry to consultation, such as consultees' roles and responsibility during consultation, problem identification, and expectations for the consultation process. The control group saw a videotape which described typical problems encountered by teachers. After viewing the videotape, subjects engaged in a 15 minute PII with a school psychologist (i.e., consultant) regarding a classroom problem. Consultees completed the Knowledge of Consultation Questionnaire (KCQ) before viewing the videotape and then again after viewing it. The KCQ contained 20 multiple choice questions drawn from the content covered in the entry information videotape. After the PII, teachers completed the Perception of Consultation Questionnaire (PCQ), a questionnaire consisting of 35 Likert items, which assessed their perceptions of the consultation interaction.

The experimental and control groups performed similarly on the KCQ prior to viewing the videotapes with mans of 7.20 (SD= 1.9) and 7.60 (SD= 2.3) questions correct, respectively. The mean number of questions correct subsequent to viewing the videotape was significantly higher for subjects in the experimental condition (M= 12.3, SD= 2.5) than subjects in the control condition (M= 8.3, SD= 3.8). The effect of entry information on subjects' perceptions of the consultation process were assessed using a one-way ANOVA with group as the independent variable. Results showed differences failing to reach significance between the experimental and control groups ($F[1, 18] = .16$, $p < .05$) with mean ratings of 4.89 for the experimental group and 5.02 for the control group. The failure to obtain a significant group difference, and the mean response levels on the questionnaire indicate that subjects in both the experimental and control groups perceived the consultation interaction favorably.

Because the effects of the videotape would likely be attenuated over the course of consultation and consultee verbal behavior would increasingly come under the control of the consultant, consultee behavior computed across the first third of the PII only was examined. Two ANOVAs with alpha adjusted to .025 indicated significantly higher rates of positive

validation [f(1,18)= 5.89, p< .025] by consultees during the first third of the interaction in the experimental (M= 11%) than the control (M= 5%) condition. Seventy-three percent of the content emitted during the consultation interaction was emitted by the consultee and most dealt with behavior setting (e.g., consequences, situational conditions) and behavior. Consultees asked few questions and made frequent statements specifying information about the students' problem. Consultants talked less than consultees, asked a greater proportion of questions, and expressed positive validation in 50 percent of their statements.

Based on the results, providing entry information to consultees may increase rates of agreement early in the consultation interaction; however, the effects of such information decreases over time spent with the consultant. Exposure to entry information significantly increased consultees' knowledge of consultation, but did not significantly alter their perceptions of consultation, and produced only temporary effects on their verbal behavior during the PII.

Hughes & DeForest (1993)

Hughes and DeForest (1993) studied the relationship between Consultation Analysis Record (CAR) categories and consultants' supportive statements to consultation outcomes. Seventeen advanced doctoral student consultants and 17 experienced consultee teachers from public and private schools participated in the study. Each consultant audiotaped their first interview with the consultee, the first interview was followed by two to five additional interviews as necessary to progress through the stages of problem-solving. An expanded form of behavioral consultation, which combined behavioral approaches to problem-solving with mental health consultation's emphasis on the relationship, was used in this study and the CAR was used to determine the frequency of consultants' verbalizations from the audiotaped transcripts. Only two categories of the CAR were coded: a) process or function served by each statement, and b) control (e.g., emitter or elicitor). Source was not coded because only the consultants' statements were of interest to the researchers and content was

not coded because it was not deemed relevant to the research questions studied. After the transcripts were coded using the CAR, statements were coded a second time regarding their relationship function (e.g., support, nonsupport, or neither).

Consultee perception of consultation outcome was obtained through the administration of the Consultation Evaluation Form (CEF), a 12 item rating scale that requires consultees to rate descriptive statements about consultation on a 7 point scale (1= strongly disagree to 7= strongly agree).

The entire first interview was coded. Since the interviews varied in length, frequencies were changed to percentages before the analyses. Further, to reduce the number of correlations and the risk of chance findings, categories representing fewer than 3 percent of the total coded messages were excluded from the analyses.

Thirty-four percent of consultants' statements were expressed as elicitors, which is the same percentage reported by Martens et al., 1989a. Specification emitters were more frequent in this study (27%) than in Martens et al., 1989a (11%), and positive validation emitters occurred less frequently (16%) than Martens et al., 1989a (40%). An average of 7.2% (SD= 5.5%) of consultant statements were coded as offering support.

Total CEF score was negatively correlated with positive validation elicitors ($r=-.62$, $p=.01$), positively correlated with inference emitters ($r=.48$, $p=.05$), and positively correlated with supportive verbalizations ($r=.47$, $p=.05$). A trend was noted for total elicitors to be negatively related to the total CEF score ($r=-.46$, $p=.06$) and for positive evaluation emitters to be positively correlated with the total CEF score ($r=.46$, $p=.06$).

These findings suggest that consultants who offer causal hypotheses regarding the consultation problem and provide support during the first consultation meeting are rated to be more effective by consultees. Further, these findings add to the evidence that closed-ended questions may not be effective in consultation with teachers.

The negative correlation between consultants' use of positive validation elicitors and

the total CEF score and the trend for a negative relationship between total elicitors and the total CEF score are inconsistent with the findings of Bergan and Tombari (1976). According to Hughes and DeForest (1993), differences between study methodologies or differences between consultation approaches used may have contributed to or explained differences in these findings.

Two limitations of this study were indicated by Hughes and DeForest (1993). First, because only the first interview was coded, findings may not generalize to subsequent consultation interviews. Second, subjective perceptions of consultation outcomes were used exclusively as the dependent variables. Despite these limitations, Hughes and DeForest (1993) interpreted their findings as supporting the importance of the consultants' relationship and problem-solving skills to consultees' evaluations of consultation.

Summary of Content Research

Behavioral consultation is a complex process influenced by many diverse, but interrelated variables that can be studied using verbal coding systems (Bergan, 1977; Erchul & Chewning, 1990). Bergan and Tombari developed an extensive coding system of verbal behavior during consultation interviews that has been used to categorize interchanges between consultants and consultees. This coding system has been used by Bergan and Tombari (1975, 1976) and others (e.g., Martens et al., 1989). According Bergan and Tombari (1975, 1976), behavioral interviewing skills are essential to identifying and solving problems addressed during consultation. Further, Bergan and Tombari (1976) concluded that problem identification is the most important stage of consultation. Effective consultation has been found to involve a relatively high frequency of behavior, behavior setting, observation, and plan message content. In behavioral consultation, critical verbal skills involve the consultant's ability to either emit or elicit statements that involve the specification, summarization, validation, or evaluation of certain information (Tombari & Davis, 1979).

Behavioral consultants who use structuring techniques, such as asking questions and seeking or offering specifics about the problem, are more effective (Bergan & Tombari, 1976). The importance of this work is in demonstrating that there is a relationship between consultant verbal behaviors and important consultation outcomes.

Research on Interpersonal Processes

Erchul (1987)

Erchul and his associates have investigated the interpersonal processes that occur during consultation. In an exploratory study, Erchul (1987) integrated principles of interpersonal communication with the consultation literature in order to gain an understanding of the control or power processes that occur during consultation. Relational communication is the term used to describe the study of the control aspects of messages that define relationships. In this paradigm, emphasis is placed on the analysis of communication process instead of verbal content, sequences of messages rather than single messages, and changes in these messages over time (Millar & Rogers, 1976).

Control in school-based consultation was examined using a modified version of the Rogers and Farace (1975) relational communication coding system. In this system, each statement is assigned a three digit message code. The first digit refers to who is speaking, either the consultant or consultee. The second digit describes the grammatical form of the message, such as a question or an assertion, while the third digit specifies the function that the message serves relative to the message that preceded it (e.g., answer a question or change the topic). Following this coding, each message is assigned a control code based on the second and third digit code combinations. Three control codes are possible: a) one-up, which is an attempt to dominate or control the relationship, b) one-down, which is indicative of acceptance of the others' relational definition or control, and c) one-across, a nondemanding, leveling movement that neutralizes the relational control.

The following four research questions were investigated by Erchul (1987): a) what

is the relationship between consultants and consultees on the control dimension? b) how does this relationship change across the development of the stages of consultation? c) how do measures of consultant control relate to his or her perceived effectiveness? and d) how do measures of consultee control relate to his or her degree of participation in the consultation process?

Eight second and third year doctoral students in school or counseling psychology served as consultants. The consultants were blind to the issues under investigation. Consultees were eight females in regular education, special education, or mental health, who worked primarily in public schools. Using a behavioral consultation model, each consultant conducted and audiotaped a problem identification interview (PII), problem analysis interview (PAI), and plan evaluation interview (PEI) with one consultee.

Measures of consultees' perceptions of consultant effectiveness and consultants' perceptions of the consultees' participation in data collection and intervention implementation were obtained. After the PEI, consultees' perceptions of consultant effectiveness were measured through the use of the Consultant Evaluation Form (CEF), a 12 item, 7-point rating scale. Consultees rated statements describing the consultant, such as "the consultant offered useful information" and "the consultant was a good listener", ranging from strongly disagree (1) to strongly agree (7).

After the PAI, consultants rated the consultees' degree of participation in baseline (preintervention) data collection on a 7 point scale ranging from (1) did not participate to (7) fully participated. After the PEI, consultants also rated the consultees' degree of participation in the implementation of the treatment plan (intervention) developed during consultation. The CEF and consultants' ratings served as dependent measures.

In all, Erchul (1987) coded 6,153 messages from 24 verbatim transcripts using procedures outlined by Rogers and Farace (1975). Scores for all participants on the relational control measures of dominance and domineeringness were tabulated.

Domineeringness reflects an individual's rate of attempts to control the relationship regardless of whether or not these attempts at control are accepted or rejected by the other. Dominance, on the other hand, indicates the percentage of one person's attempts at control that were accepted by the other and thus, offers information on the interaction sequence (Rogers-Millar & Millar, 1979). Domineeringness is viewed as a less effective and enjoyable communication pattern, while dominance is seen as a more productive and satisfying communication pattern.

The main finding of Erchul (1987) is that consultants controlled the relationship with consultees across all three behavioral consultation interviews. A positive relationship ($r = .65$, $p < .08$) was found between consultant dominance scores and CEF scores. Since consultant dominance is defined as a one-up message by the consultant followed by a one-down message by the consultee and the majority of these sequences were question-answer sequences, it may be that skilled interviewers act as and are perceived as effective consultants. If this hypothesis is in fact true, then Bergan and Tombari's (1975) claim that well-developed interviewing skills are essential for the identification and remediation of problems presented during consultation has received additional support. Consultant domineeringness scores and CEF scores were not significantly related ($r = -.40$, $p < .34$). A negative relationship ($r = -.81$, $p < .02$) was found between consultee domineeringness and consultants' perceptions of consultee willingness to participate in baseline data collection. This finding suggests that the likelihood of a teacher collecting baseline data can be inferred from an aspect of his/her relational communication (i.e., domineeringness). The replication of this finding and the refinement of the methodology may in the future allow the consultant to determine during the PII whether or not the teacher will be an active participant in consultation or if another type of intervention should be pursued instead of consultation. Consultee dominance scores were not significantly correlated with consultants' perceptions of consultee willingness to participate in baseline data collection ($r = .52$, $p < .19$) or

consultants' perceptions of consultees willingness to participate in treatment plan implementation ($r = .06$, $p < .90$). Consultee domineeringness scores were not found to significantly correlate ($r = -.52$, $p < .19$) with consultants' perceptions of consultees willingness to participate in treatment plan implementation. Several of these correlations are fairly large, but are nonsignificant probably due to the small sample size.

Consultants who had high dominance scores were perceived by consultees to be more effective. Further, consultees with high domineeringness scores were perceived by consultants to be less willing to participate in baseline data collection, but not plan implementation. These correlational results support Rogers-Millar and Millar's (1979) distinction between dominance and domineeringness. Both view domineeringness as a less effective and satisfying communication pattern, while viewing dominance as a more productive and satisfying form of communication.

A two way MANOVA employing a 2x 3 design for repeated measures was performed for the dependent variables of dominance and domineeringness. The factors included role (i.e., consultant and consultee) and interview type (i.e., PII, PAI, and PEI). Using Wilk's lambda, a significant main effect was noted for role [$f(2,13) = 56.22$, $p < .0001$]. Two separate 2x 3 repeated measures ANOVAs were run for the two relational control variables, dominance and domineeringness. Significant main effects were obtained for both dominance [$f(1,14) = 13.46$, $p < .003$], and domineeringness [$f(1,14) = 27.60$, $p < .001$]. Consultants' dominance and domineeringness scores were higher than those of consultees across all interviews, indicating that consultants had greater control in defining the consultation relationship throughout the consultation process.

The main finding of this study was that the consultant defines the complementary relationship with the consultee across all three behavioral consultation interviews. Based on these findings, behavioral consultation is seen as directive and the consultant controls the nature and course of the problem solving episodes. These results may appear to challenge

the generally held principle of collaborative, nonhierarchical relationships in school-based consultation.

Erchul (1987) gives three explanations for this finding. First, it may be that behavioral consultation does not involve an egalitarian relationship even though other models of consultation may involve such a relationship. This explanation is supported by Bergan and Tombari (1975), who have emphasized techniques (e.g., elicitors or questions) that facilitate consultant control over consultation. A second possibility is that the definition of the social roles of consultant and consultee may produce an unequal relationship. For example, sixty-two percent of consultants' one-up messages were questions, which are acceptable and expected in a helping interview, while seventy-three percent of consultees' one-up messages were interruptions which are generally considered to be impolite and disruptive. Therefore, it appears that more avenues of control are open to consultants (e.g., questions) than to consultees and the ones that are open to consultees are constrained by social acceptability (e.g., interruptions). Other evidence in support of this second explanation, is the fact that the term consultant is closely related to the term expert and it may be that the person who serves as a consultant is seen as more powerful than the person (i.e., the consultee) who sought the assistance of the consultant. The third explanation given is that the Rogers and Farace coding system may adequately capture consultant control maneuvers, but may be insensitive to consultees' attempts at control. Thus, it may be that consultees' attempts at control may be more subtle than the Rogers and Farace system can detect and may involve control through submission. For example, if the consultee's motive is to have the consultant solve the problem, he/she may withdraw or submit instead of participating in the consultation interview.

Witt et al. (1991)

Using the same sample as Erchul (1987), Witt, Erchul, McKee, Pardue, and Wickstrom (1991) examined the following two research questions using a coding system

derived from Tracey, Heck, & Lichtenberg, (1981) and Tracey & Ray (1984) : a) does each participant have an equal opportunity to talk about what they want to talk about? and b) if there is a difference in conversational control, is this a difference that makes a difference? Three interviews were conducted by each consultant using Bergan's (1977) model of behavioral consultation.

Each person's speaking turn was coded as either topic following or topic initiation based on the preceding statement of the previous speaker. A statement was coded as topic initiation if it differed from the previous topic in any of the following five ways: a) different content, b) different person, c) different time reference, d) different level of specificity, and e) outright denial to pursue previous topic while offering no others (see Tracey and Ray, 1984 for a more detailed explanation). Any statement or response not coded as topic initiation based on these criteria was coded as topic following.

Measures of consultees' perceptions of consultant effectiveness and consultants' perceptions of the consultees' participation in data collection and intervention implementation were obtained and served as the measures of consultation outcome. After the PEI, consultees' perceptions of consultant effectiveness were measured through the use of the Consultant Evaluation Form (CEF), a 12 item, 7-point rating scale. Consultees rated statements describing the consultant, such as "the consultant offered useful information" and "the consultant was a good listener", ranging from strongly disagree (1) to strongly agree (7). After the PAI, consultants rated the consultees' degree of participation in baseline (preintervention) data collection on a 7 point scale ranging from (1) did not participate to (7) fully participated. After the PEI, consultants also rated the consultees' degree of participation in the implementation of the treatment plan (intervention) developed during consultation on a 7 point scale ranging from (1) did not participate to (7) fully participated.

Two contextual variables were derived from the individual measures, topic following and topic initiation. Since these contextual variables were defined by measures

taken from both consultants and consultees, they allow for the assessment of the consultation interaction. Contextual variables were a) topic determination (TD) or the degree to which consultants and consultees were successful in changing topics, and b) topic continuation (TC) or the proportion of following responses given prior following response by the other participant. Topic determination is the ratio of topic change successes over the total number of topic initiations and provides an index of who was in control.

A one-way ANOVA with repeated measures was used to examine differences between consultants and consultees on the topic determination (TD) variable as measured during the PII, PAI, and PEI. There was a significant effect for role [$f(1,15)= 22.72$, $p< .01$]. Thus, the mean TD proportion for consultants ($M= .78$) was significantly greater than the mean for consultees ($M= .58$). These results indicate that consultants successfully initiated topic changes 78 percent of the time, while consultees successfully initiated a topic change only 58 percent of the time. There was also a significant effect on the interview variable [$F(2,32)= 3.64$, $p< .05$], indicating that TD values vary across the three interviews. This interview effect should be viewed with caution given the significant role x interview interaction effect [$F(2,32)= 3.86$, $p< .05$]. This interaction effect suggests that differences in level of topic determination across the three interviews were not parallel for consultants and consultees. Mean level of TD for consultants was very similar across interviews (i.e., in the high .70s), while the mean level of TD for consultees was .43 during the PII and rose to .65 during the PAI and PEI. Consultants were generally more successful in initiating topic changes than consultees, especially during the PII.

A separate one-way ANOVA with repeated measures was used to examine differences between consultants and consultees in terms of the level of topic continuation as measured during the PII, PAI, and PEI. The main effect for role [$F(1,15)= 3.68$, $p< .10$] approached significance on the TC variable but no differences for either the role or interview variable were revealed.

In order to answer the question, "Is this a difference that makes a difference", the relationship between the TD variable and measures of consultation outcome was examined. During the PII and PEI, TD for the consultant was positively related to consultees' willingness to implement the treatment plan ($r=.72$, $p< .05$) and ($r=.65$, $p< .1$, two-tailed), respectively. Thus, when the consultant took control during the PII, the consultee was more likely to carry out the treatment plan. In addition, there was a general trend for consultant TD to be positively related to both consultants' and consultees' perceptions of consultation outcome. In contrast, TD for consultees had a relatively low and frequently nonsignificant relationship with outcome measures with correlations ranging from .35 to -.49.

The following results were obtained: a) topic determination (TD) for consultants was positively related to consultant and consultee perceptions of outcome; b) TD for consultees was low and in many cases negatively associated with outcome measures; c) the variable most strongly related with consultees' willingness to carry out the treatment plan was TD for the consultant during the PII; and d) total initiations and TD for consultees were negatively associated with the measure of consultee willingness to carryout the treatment plan. Thus, consultants who successfully exert control over the topic of consultation were rated as more effective by consultees and rated their consultees as being more willing to carryout the treatment plan. The limitations of this study include: a) small sample size, b) graduate students as consultants, c) outcome measures based on perceptions, d) use of only one model of consultation (i.e., behavioral), and e) probable elevated Type I error rates due to the large number of bivariate correlations calculated. The extent to which data can be generalized to more experienced consultants or to other models of consultation is unknown.

Erchul & Chewning (1990)

Erchul and Chewning (1990) further examined the aspects of interpersonal control within the behavioral consultation (Bergan, 1977) relationship using Folger and Puck's (1976) relational communication coding system. The Folger and Puck coding system allows

for the quantification of relational communication by examining the requests or bids (e.g., questions, instructions, commands) made by one person and the response of the other person (e.g., acceptance, rejection, evasion) to these requests (Folger & Puck, 1976). Patterns of request-response sequences across behavioral consultation interviews were examined. Erchul and Chewning predicted that a) consultees would be passive, accepting, and cooperative within the consultation relationship, and b) consultants would be shown to control the consultation relationship through the use of frequent requests. The Folger and Puck (1976) system was used, instead of the Rogers and Farace (1975) system, because the former has better documented validity and allows for the sampling of messages from interviews.

Consultants were ten second and third year doctoral students in counseling or school psychology. Of the ten female consultees, six were regular education teachers, 3 were special education teachers, and one had a role with community mental health. Clients were 4 to 17 years and all but one attended public schools. Seven clients were referred for behavioral difficulties and three for academic problems.

PII, PAI, and PEI were conducted and audiotaped by each consultant with one consultee. One Thousand and seventy-four request/response transactions were coded. The same outcome measures as Erchul (1987) were used in this study.

A two-way split-plot MANOVA was performed for the dependent variables (i.e., total bids, D bids, D+ bids, and S bids). The two fixed factors included role (i.e., consultant and consultee), a between group factor, and interview type (i.e., PII, PAI, and PEI), within subjects factor. Using Wilk's lambda, significant main effects were found for role [$f(4,15)= 24.36$, $p< .0001$], interview type [$f(8,66)= 9.55$, $p< .0001$], and the role by interview interaction [$f(8,66)= 6.47$, $p< .0001$]. Separate 2 x3 repeated measures ANOVAs were run for the four dependent measures (e.g., D+, S). All four of these ANOVAs produced significant findings ($p= .008$ or less) for role, interview type, and role by

interview type interaction.

Due to the low overall frequency of consultee bids, only consultant bids were examined over time by Erchul and Chewning (1990). Newman-Keuls comparisons conducted separately for each variable (i.e., D, D+, S, and total bids) revealed significant differences between PII and PEI means and between PAI and PEI means, but not between PII and PAI means. The general pattern found was for consultants to display higher rates of these bids during the PII and PAI than in the PEI. Newman-Keuls comparisons on D bids indicate that significant differences between PII and PAI means and between PAI and PEI means occur but not between PII and PEI means. Consultants gave more direct instructions during the PAI than during the PII or PEI.

Results indicate that the frequency of consultant requests is positively related to consultant effectiveness and the frequency of consultee requests is negatively related (e.g., $r = -.54$, $p < .05$) to consultant effectiveness. Consultees on average initiated only 15 requests, while consultants initiated an average of 93.5 requests throughout the consultation interviews. Consultees accepted 94 percent of consultants' requests. Consultants made more bids or requests than consultees and therefore controlled the nature and course of consultation. This finding is consistent with Erchul (1987). These results suggest that consultation is a cooperative endeavor where favorable outcomes are achieved when the consultee follows the lead of the consultant.

Limitations of this study include the small sample size and the use of graduate student consultants. Another limitation is the fact that Folger and Puck (1976) coding system has not been validated for use in consultation research and that validity and reliability studies of it are scarce.

Erchul et al. (1995)

Erchul, Covington, Hughes, and Meyers (1995) used Folger and Puck's (1976) relational communication coding system and a variety of models of consultation (e.g.,

mental health, behavioral) to test two hypotheses: a) the more that the consultee follows the lead of the consultant by not making requests of the consultant and/or not directing questions toward the consultant, the more favorable the outcomes of consultation, and b) consultant use of bids or requests (e.g., questions, instructions, commands) will be associated with positive consultation outcomes. Twenty-six advanced school psychology graduate students served as consultants. Twenty-six school-based professionals, mostly teachers, served as consultees. The average age of clients was 10, and 68 percent of the clients were males. Each consultant met with one consultee and audiotaped a minimum of three consultation sessions and proceeded through all of the stages of joint problem-solving, such as identifying problems, gathering assessment information, and developing and implementing strategies for problem resolution. Consultants employed several models of consultation, including mental health consultation (Meyers, Parsons, & Martin, 1979) and behavioral consultation (Bergan & Kratochwill, 1990). Since the number of interview meetings varied across dyads, only the initial meeting between consultants and consultees was examined.

The three types of bids (i.e., dominant, dominant-affiliative, submissive) and three types of responses (i.e., accept, reject, evade) were tabulated separately for the consultant and consultee and comprised the 12 process variables used in this study. The Consultant Evaluation Form (CEF) was the outcome variable. A modified version of the Folger and Puck (1976) coding system was used to examine 1,017 bid/response transactions.

Result indicated that consultants and consultees used dominant-affiliative bids more often than other types of bids. Across all three types of bids, consultants made approximately 12 times more bids than consultees. Ninety-seven percent of consultant bids were accepted by consultees, while 87 percent of consultee bids were accepted by consultants. Types of consultant and consultee bids (i.e., D, D+, and S) were correlated with CEF scores, yielding six correlations of interest. Based on hypotheses, significant

negative correlations between consultee bids and CEF scores and significant positive correlations between consultant bids and CEF scores were predicted. The correlations, which ranged in absolute value from .08 to .23, were all nonsignificant.

The present sample of consultants and consultees were more controlling than the sample investigated by Erchul and Chewning (1990) as indicated by differences in rates of D+ and S bids and differences in the ratio of consultant and consultee bids across the two studies. For example, Erchul and Chewning (1990) reported that their consultants used D+ bids 39.6% of the time and S bids 51.4% of the time, consultants in the present study used D+ 82.2% of the time and S bids only 8.1% of the time. Further, Erchul and Chewning (1990) reported that consultant D bids outnumbered those of consultees by 40:1, D+ bids by 21:1, and S bids by 6:1. In the present study, consultants D bids outnumbered those by consultees by 78:1, D+ bids by 15:1, and S bids by only 3:1. Since the present consultants used a higher percentage of D+ bids and had a higher ratio of D bids and a lower ratio of S bids, Erchul et al. (1995) deduced that their consultants were more controlling than the consultants in Erchul and Chewning (1990). Similarly, consultees in the present study used D+ bids a higher percentage of the time (63.4%) and S bids a lower percentage of time (35.5%) when compared percentages of D+ bids (17.7%) and S bids (80%) in the Erchul and Chewning (1990) study.

Although no support was obtained for the study's hypotheses, the correlations involving consultants were fairly consistent with those obtained by Erchul and Chewning (1990), while the correlations involving consultees were different from those obtained by Erchul and Chewning (1990). The following correlations between consultant bids and CEF scores were obtained in the two studies: a) dominant bids, r= -.20 (Erchul & Chewning, 1990) and r= -.18 (current study), b) dominant-affiliative bids, r= .18 (Erchul & Chewning, 1990) and r= .10 (current study), and c) submissive bids, r= .10 (Erchul & Chewning, 1990) and r= .15 (current study). The following correlations between consultee bids and

CEF scores were obtained in the two studies: a) dominant bids, r= .18 (Erchul & Chewning, 1990) and r= .20 (current study), b) dominant-affiliative bids, r= .47 (Erchul & Chewning, 1990) and r= -.08 (current study), and c) submissive bids, r= -.19 (Erchul & Chewning, 1990) and r= .26 (current study).

Two significant findings were obtained for a subsample of fourteen consultants who used behavioral consultation: a) consultants' use of dominant bids was correlated negatively (r= -.67, p= .008, two-tailed) with consultees' perceptions of consultant effectiveness, and b) consultants' use of dominant-affiliative requests was correlated significantly (r= .52, p= .027, one-tailed) with consultees' perceptions of consultant effectiveness. Thus, to the extent that consultants used dominant-affiliative bids rather than other types of bids, consultees' perceptions of their effectiveness tended to be more favorable.

Summary of Interpersonal Process Research

Erchul and his colleagues have used three different coding systems and several outcome measures to examine relational control within consultation interactions. These researchers have found that consultants tend to exercise control over the consultation process by asking questions, making dominant and dominant-affiliative requests, offering directives, and initiating topic changes. Consultants who exercise control during consultation interactions have been found to be more effective than consultants who exercise less control. Consultant control has also been shown to relate to consultee participation in the consultation process. Further, within school-based consultation, more favorable results are obtained when the consultee follows the direction established by the consultant in the interview rather than attempting to change the direction. These findings have lead us to refine our concept of collaboration in consultation relationships.

Problems with Consultation Research

Consultation research suffers from many methodological limitations, including lack of adequate control procedures, failure to control for consultee and consultant

characteristics, excessive reliance on self-report, questionnaire, and attitudinal data rather than direct observation of behavior change (Gutkin, 1993), infrequent use of multiple behavioral and attitudinal measures of consultants, consultees, and clients, absence of follow-up data (Gresham & Kendell, 1987; Medway, 1979), infrequent use of sophisticated statistics (Alpert & Yammer, 1983; Gresham & Kendell, 1987), use of graduate student subjects rather than practicing school psychologists. All of these methodological problems limit the generalizability of research findings.

Although there may be value in learning about the subjective perceptions of consultants, consultees, and clients (Gutkin, 1986) and thus self-report measures may have a role to play to consultation research, these types of data are clearly inferior to direct behavioral observation data when the goal is to determine what objectively occurred as a result of consultation. Thus, there is a need to collect data from other sources and to see if there is support for the perceptions. There is a need to collect data from other sources as to whether the teacher did actually collect data or implement the intervention as planned rather than just relying on perceptual data (Witt et al., 1991). The inclusion of quantitative data also removes the experimenter bias that is present in many case study reports (Pryzwansky, 1986).

Many research investigations have used student consultants. According to Pryzwansky (1986), there is nothing wrong with using this population; however, authors often minimize the fact that student consultants were used in their interpretation of study results. The extent to which data based on graduate student consultants can be generalized to other more experienced consultants is not known.

A limited number of studies have included long term follow-up (Medway, 1982) and studies have paid little attention to whether the short term gains of clients and consultees are maintained across time, settings, and behaviors. Data on the maintenance of consultation gains are crucial to assessing the true effectiveness of consultation and helping

consultants learn how to promote long-term behavior changes (Gutkin, 1993).

DIRECTIONS FOR FUTURE RESEARCH

Researchers have found consultants who use structuring techniques (e.g., asking questions and seeking specifics about problems) to be more effective than those who do not. There is a need to further investigate interpersonal processes that occur within and across various stages of the consultation process (West & Idol, 1987) and their relationship to consultation outcomes. Since most of these studies have involved the use of graduate student consultants, there is a need for future research to use samples of practicing school psychologists as consultants. Erchul et al. (1995) called for the use of practitioners rather than advanced graduate students in the consultation research.

Further, there is a need to develop and refine verbal interaction coding schemes, especially those that focus on the reciprocal influences between consultants and consultees or that involve the coding of the conditional function of words and phrases (Erchul, 1987). Data also are needed on treatment integrity, consultee satisfaction with consultation, consultees' and consultants' perceptions of client outcomes, and direct observations of student outcomes. Consultant and consultee variables that relate to consultation outcomes also are in need of being investigated (Gutkin, 1986).

There is a need for increased attention to the treatment integrity of consultation processes that occur during research. Very few investigations have included systematic checks to determine whether consultation services were provided as they were intended to be provided (Gresham, 1989; Kratochwill, Sheridan, & Van Someren, 1988).

In future research, there is a need to operationalize the actual model of consultation being used (Gutkin, 1993; Pryzwansky, 1986; West & Idol, 1987). Since the most promising results of Erchul et al. (1995) involved a subsample of behavioral consultants, there is a need for future research investigations of interpersonal processes in consultation to involve larger samples of behavioral consultants to further investigate these findings.

SUMMARY AND CONCLUSIONS

Behavioral consultation is a complex process influenced by many diverse, but interrelated variables that can be studied using verbal coding systems (Bergan, 1977; Erchul & Chewning, 1990). Bergan and Tombari developed an extensive coding system of verbal behavior during consultation interviews that has been used to categorize interchanges between consultants and consultees. Their research indicates that the message categories of this coding system (e.g., source, content, process) are important in consultation. Specifically, effective use of consultation has been found to require a relatively high frequency of behavior, behavior setting, observation, and plan message content. In behavioral consultation, critical verbal skills involve the consultant's ability to either emit or elicit statements that involve the specification, summarization, validation, or evaluation of certain information (Tombari & Davis, 1979). According to Erchul and Chewning (1990), school-based behavioral consultation involves a cooperative rather than collaborative relationship, in that consultees follow the lead of consultants.

Erchul (1987), Erchul & Chewning (1990), Erchul et al., 1995, and Witt et al. (1991) have concluded that effective consultants tend to exercise control over the consultation process by asking questions, offering directives, and initiating topic changes. Behavioral consultants who use structuring techniques, such as asking questions and seeking or offering specifics about the problem, are more effective (Bergan & Tombari, 1976; Erchul, 1987). Further, within school-based consultation, more favorable results are obtained when the consultee follows the direction established by the consultant in the interview rather than attempting to change the direction.

According to Medway (1982), the emphasis on process research in consultation will more than likely continue as investigators determine what makes consultation work. While researchers (e.g., Bergan & Tombari, 1975, 1976; Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995; Witt et al., 1991) have begun to unveil consultation

processes that are related to consultation outcomes, there is a need for additional research that studies the relationship between consultation processes and outcomes.

Currently, a debate exists among researchers and practitioners regarding the type of consultant-consultee relationship that is desirable. While many researchers and practitioners argue that the consultation relationship should be collaborative and nonhierarchical (e.g., Babcock & Pryzwansky, 1983; Gutkin & Curtis, 1990; Hughes, 1992; Parsons & Meyers, 1984; Wenger, 1979), others have argued that the consultation relationship should be viewed as cooperative in that the consultant guides the consultee through the process of consultation in order to achieve successful outcomes (e.g., Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990; Martin, 1978; Witt et al., 1991). Additional research that addresses this debate is needed.

Relational communication coding systems have provided a methodology for operationally defining interpersonal control and for studying the relationship between this consultation process and consultation outcomes.

The purpose of the following study is to examine aspects of interpersonal control within the behavioral consultation relationship using a sample of practicing school psychologists and the Folger and Puck (1976) request-centered relational coding system. The study is similar to Erchul and Chewning (1990), in that the same coding procedure was used and similar outcome measures were utilized. The study addresses the relationship between measures of consultant and consultee control in behavioral consultation to a) consultee satisfaction; b) client behavior change; c) perceived treatment integrity; and d) perceptions of client behavior change.

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AN ANALYSIS OF REQUEST-CENTERED RELATIONAL COMMUNICATION WITHIN BEHAVIORAL CONSULTATION USING A SAMPLE OF PRACTICING SCHOOL PSYCHOLOGISTS: AN EMPIRICAL STUDY

A paper prepared for submission to School Psychology Review

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Abstract

The Folger and Puck (1976) request-centered relational communication coding system was used to examine the relationship between measures of consultant and consultee control in behavioral consultation and a) consultee satisfaction; b) client behavior change; c) perceived treatment integrity; and d) perceptions of client behavior change. School psychologists from across Iowa served as consultants to one consultee each across three problem-solving interviews. The Problem Identification Interview was audiotaped and request-response transactions were coded. Requests were coded as either: dominant, dominant-affiliative, or submissive and served as measures of consultant and consultee control. Responses were coded as either: accepting, rejecting, or evading the other's request. Measures of consultant and consultee control and the outcome measures were correlated. The hypotheses regarding the relationship between consultant and consultee measures of control and consultation outcomes were not supported. Consultant and consultee total bids, which provide a measure of interview length, were significantly related to consultee satisfaction with consultation and treatment integrity. The longer the consultation interview the more dissatisfied the consultees were with consultation and the less likely they were to implement interventions with integrity. Consistent with previous research (Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995; Witt et al., 1991) a pattern of interaction where the consultant leads and the consultee follows during consultation was found. Further, consultation resulted in positive outcomes for clients.

These results were not, however, adequately explained by the variables studied in this research. Several explanations were advanced for these nonsignificant findings (e.g., reduced variability, measurement error).

INTRODUCTION

Recently, the focus of school psychological service delivery has increasingly been on consultation. Reschly (1989) defines consultation as an indirect, collaborative problem-solving endeavor involving a consultant and consultee who develop a plan to resolve a problem exhibited by a third person, the client. In this scenario, a consultant may offer consultation to many consultees, who in turn may work with many clients. Thus, there is a multiplier effect, in that more clients can benefit from the consultant's expertise through consultation than when direct services (e.g., counseling) are provided from a consultant to a single client (Bergan, Feld, & Swarner, 1988). Consultation emphasizes techniques to improve consultee skills and attitudes, interpersonal causes of difficulties, and prevention of problems (Medway & Updyke, 1985). A key assumption of consultation is that consultants add to consultees' knowledge and skills in dealing with clients and that after the termination of consultation consultees are expected to independently apply their knowledge and skills to other students who have similar problems (Erchul, 1987).

School-based consultation has received strong support from school professionals. School psychologists identify consultation as one of their most preferred roles (Gutkin & Curtis, 1982) and want to spend more time in consultation (Costenbader, Swartz, & Petrix, 1992; Reschly & Wilson, 1995), while teachers and administrators view consultation as one of the most important services that school psychologists can provide (Curtis & Zins, 1981). Teachers who have been exposed to consultation report that they value the process of consultation and place high priority on working with consultants (Gutkin, 1980).

According to Reschly (1976), Gutkin and Curtis (1982), and Zins and Erchul (1995), the three models of consultation most frequently used in school psychology

practice are: a) Behavioral (Bergan, 1977; Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990); b) Mental Health (Caplan, 1970); and c) Organization Development (Schmuck, 1990; Schmuck & Miles, 1971; Schmuck & Runkel, 1988). While these models substantially differ in theoretical orientation, methods of intervention, and roles and relationships of consultees and consultants, they have a number of elements in common. For example, all of these models use a problem-solving process to develop interventions, emphasize work-related problems, and view participation in the process as voluntary (Zins & Erchul, 1995).

Typically, consultation in the schools is conducted on an individual case basis with a teacher or parent consultee for the purpose of addressing the problems of a small number of children (Bergan, Feld, & Swarner, 1988). Most consultation research is done in elementary schools (Alpert & Yammer, 1983; Mannino & Shore, 1975) with the primary goal of the remediation of academic or behavioral problems (Alpert & Yammer, 1983).

Since consultation is an indirect form of service delivery, which requires consultants and consultees to work together to help clients, the establishment of a collaborative relationship between the consultant and consultee is often identified as a critical characteristic of consultation (Babcock & Pryzwansky, 1983; Conoley & Conoley, 1982; Curtis & Watson, 1980; Erchul, 1992; Gutkin & Curtis, 1990; Zins, Curtis, Graden, & Ponti, 1988). Further, the relationship between the consultee and consultant is generally conceptualized as open, trusting and voluntary in nature. The active involvement of the consultee in all aspects of the consultation process, including the definition of the problem and the development, implementation, and evaluation of treatment plans, also is a key ingredient for success (Gutkin & Curtis, 1990; Zins et al., 1988).

Currently, a debate exists among researchers and practitioners regarding the nature of the relationship between consultants and consultees. While most argue that consultation should be viewed as involving a collaborative, nonhierarchical relationship (Babcock &

Pryzwansky, 1983; Caplan, 1970; Gutkin & Curtis, 1990; Idol, Paolucci-Whitcomb, & Nevin, 1986; Parsons & Meyers, 1984; Reinking, Livesay, & Kohl, 1978; Reynolds, Gutkin, Elliott, & Witt, 1984; Sheridan, 1992; Tyler, Pargament, & Gatz, 1983; Zins et al., 1988), others have argued that consultation should be viewed as an interpersonal influence process in which the consultant directs or guides the consultation process toward successful outcomes (Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990; Noell & Witt, 1996; Witt, 1990a, 1990b; Witt, Erchul, McKee, Pardue, & Wickstrom, 1991). This debate is unresolved and shows a need for more research.

There are so few data in support of either a hierarchical relationship or a collaborative relationship in consultation that it is undetermined at this point which type of relationship results in the best outcomes (Witt, 1990b). Further, the studies which have documented consultee preferences for collaborative consultation relationships have not been based on the actual practice of consultation but instead have involved the use of analogue procedures (Erchul & Chewning, 1990). Clearly, there is a need to further define collaboration and noncollaboration (Witt, 1990b) and for additional research investigation of the consultation relationship (Gutkin, 1993; Witt, 1990a). The actual nature of the relationship between consultants and consultees remains unknown and the debate among researchers on this subject continues.

Several literature reviews and meta-analyses have documented that consultation is an effective form of service delivery to children and youth in school settings (Mannino & Shore, 1975; Medway, 1979; Medway & Updyke, 1985). According to various literature reviews and meta-analyses of the school-based consultation research (Alpert & Yammer, 1983; Gresham & Kendell, 1987; Gutkin, 1993; Gutkin & Curtis, 1990; Medway, 1979, 1982; Pryzwansky, 1986), there is a need for additional research on the interpersonal communication processes that occur between consultants and consultees during consultation. Recently, there has been increasing interest in the communication behaviors of

consultants and consultees as they interact during school-based consultation. Several research studies focusing on interpersonal communication processes have been published (e.g., Erchul, 1987; Erchul & Chewning, 1990).

According to Erchul (1993), the field of interpersonal communication has much to contribute to our understanding of the process of consultation. There are two main approaches to investigating the interpersonal exchanges between consultants and consultees. One focuses on the verbal content of consultation interactions, such as the Consultation Analysis Record (CAR) developed by Bergan and Tombari (1975, 1976) while the other focuses on the relational aspects of the interactions, such as the Folger and Puck (1976) relational coding system, which has been applied to consultation by Erchul and his colleagues.

Behavioral consultation is a complex process influenced by many diverse, but interrelated variables that can be studied using verbal coding systems (Bergan, 1977; Erchul & Chewning, 1990). Bergan and Tombari developed an extensive coding system of verbal behavior during consultation interviews that has been used to categorize interchanges between consultants and consultees. This coding system has been used by Bergan and Tombari (1975, 1976) and others (e.g., Martens, Lewandowski, & Houk, 1989). According Bergan and Tombari (1975, 1976), behavioral interviewing skills are essential to identifying and solving problems addressed during consultation. Further, Bergan and Tombari (1976) concluded that problem identification is the most important stage of consultation. Effective consultation has been found to involve a relatively high frequency of behavior, behavior setting, observation, and plan message content. In behavioral consultation, critical verbal skills involve the consultant's ability to either emit or elicit statements that involve the specification, summarization, validation, or evaluation of certain information (Tombari & Davis, 1979).

Behavioral consultants who use structuring techniques, such as asking questions

and seeking or offering specifics about the problem, are more effective (Bergan & Tombari, 1976). The importance of this work is in demonstrating that there is a relationship between consultant verbal behaviors and important consultation outcomes.

Erchul and his colleagues (Erchul, 1987; Erchul & Chewning, 1990; Erchul, Covington, Hughes, & Meyers, 1995; Witt et al., 1991) have used three different coding systems and several outcome measures to examine relational control within consultation interactions. Control is concerned with determining who has the authority to direct, define, and delimit the relationship between two or more individuals (Millar & Rogers, 1976). These researchers have found that consultants tend to exercise control over the consultation process by asking questions, making dominant and dominant-affiliative requests, offering directives, and initiating topic changes. Consultants who exercise control over the consultation process by asking questions, offering directives, and initiating topic changes have been found to be more effective than consultants who exercise less control. Consultant control has also been shown to relate to consultee participation in the consultation process. Further, within school-based consultation, more favorable results are obtained when the consultee follows the direction established by the consultant in the interview rather than attempting to change the direction. These findings have lead us to refine our concept of collaboration in consultation relationships.

The purpose of this study is to examine aspects of interpersonal control within the behavioral consultation relationship using a sample of practicing school psychologists and the Folger and Puck (1976) request-centered relational coding system. This study is similar to Erchul and Chewning (1990), in that the same coding procedure were used and similar outcome measures were utilized. This study addresses the relationship of measures of consultant and consultee control in behavioral consultation to a) consultee satisfaction; b) client behavior change; c) perceived treatment integrity; and d) perceptions of client behavior change.

METHOD

Subjects

The subjects for this study participated in the Relevant Educational Assessment and Interventions Model (RE-AIM) training and research project (Grimes & Reschly, 1986). A total of 114 school psychologists participated in the RE-AIM project. A subsample of 44 school psychologists out of the original sample of 114 were included in a thesis study by Phillips (1987) which investigated consultee satisfaction with consultation and included the completion of the consumer satisfaction questionnaire, which was an important outcome measure in the current study. Of this sample of 44 school psychologists, seven cases included an audiotaped consultation interview and consumer satisfaction questionnaire, but no case summary report form, which included several other outcome measures used in this study. Four cases included a consumer satisfaction questionnaire, but no audiotaped consultation interview or case summary report form. Therefore, the useable sample for this study was 33 school psychologist-consultee interviews with the following items: the consumer satisfaction questionnaire, the case summary report form, and an audiotape of the consultation interview.

Subjects included school psychologists, teachers, and students. Behavioral consultation took place in the public schools. The focus of cases was on a single child or adolescent. Information obtained from the audiotaped consultation interviews and case summary report forms indicated that the consultation process in this study often occurred at the level of special education referral or after the student was already in special education rather than before special education was being considered. Each consultant-consultee-client triad was assigned an identification number which was coded on all audiotapes, case summary forms, and surveys to insure confidentiality.

Consultants

Prior to the initiation of consultation, consultants received intensive instruction in behavioral consultation during a two day workshop (Phillips, 1987). Thirty-three school psychologists employed by Area Education Agencies 11, 12, 13, and 14 in Iowa and the Des Moines Independent School District served as consultants. Of the 33 consultants, 20 held masters' degrees, 6 held specialist degrees, and 6 held doctoral degrees. The number of years of professional experience in education varied from 1 to 30 years with a mean of 13.2 years. They had a mean of 10.8 years experience as school psychologists (1 to 25 years). Nineteen of the school psychologists (58%) had taken at least one graduate course in behavior analysis. Sixty-one percent (n=20) of the consultants had at least one year of teaching experience in regular or special education. There were 19 female and 14 male consultants in this study. When asked what consultation model typically was used in their practice, 17 selected behavioral consultation, eight selected no systematic model, six did not specify a model, one selected organizational development consultation, and another indicated that consultation was not used. Consultants reported that they spend an average of 11.5 hours a week consulting with parents, teachers, and administrators (range= 3 to 40 hours).

Each consultant was asked to conduct two audiotaped behavioral consultation Problem Identification Interviews with parents or teachers of students demonstrating learning or behavioral problems. Consultants worked with either one or two consultees, resulting in up to two consultation cases per consultant. There were a total of 33 school psychologists and 52 cases. One case of the two was randomly selected for use in this study, due to questionable independence of the data and generalization difficulties that would arise if both cases conducted by a single consultant were included in this investigation. Slips of paper with subject identification numbers written on them were placed in a hat and drawn out at random. In situations where a school psychologist had two

cases, two slips of paper were placed in the hat and labeled case 1 and case 2 (e.g., Id #1, case 1; Id #1, case 2). Once a case was selected, the second case, if available, was thrown out so that only one case from each school psychologist was used in the study for a total of 33 cases. Complete and useable cases for this study required: an audiotape of the Problem Identification Interview that could be transcribed; the portion of the case summary report form which addressed information regarding the Problem Identification Interview (See Appendix A); questions 2, 5, 6, 7, 17a, 17b, 17c, 17d, 17e, and 22 completed on the consumer satisfaction questionnaire (See Appendix B); and an intervention needed to have been implemented as a result of consultation. Sixty-four percent of the cases chosen were the first case.

Consultees

Thirty-three Iowa teachers served as consultees. Of these 33 teachers, 17 were regular education teachers and 16 were special education teachers. Sixty-four percent taught in elementary schools (n=21), 21 percent taught in middle schools (n=7), nine percent taught in preschool settings (n=3), and six percent taught in high schools (n=2). Their number of years of teaching experience varied from 2 to 30 years with a mean of 13.72 years. Twenty-five (76%) of the teachers had taken at least one undergraduate or graduate course in applied behavior analysis or behavior modification, while six of the teachers had participated in a half or full day workshop on behavior modification. Only two teachers reported no training in behavior modification. Sixty-seven percent of the teachers had participated in consultation previously; for 33 percent of the teachers this was their first consultation experience. There were 30 female and 3 male consultees in this study.

Consultees were selected by consultants to participate in a series of behavioral consultation (BC) interviews in order to meet the requirements of the Relevant Educational Assessment and Interventions Model (RE-AIM) training and research project (Grimes & Reschly, 1986). Consultees were not randomly selected. It is possible that teachers with

whom the consultants were familiar, and perhaps friendly, were chosen for participation in consultation. This may have biased the outcomes obtained in this study. Ideally, consultants would have randomly selected the consultees for participation in consultation. Prior to participation in consultation, each consultee signed a consent form authorizing the interview and data collection activities.

Clients

Clients were 33 students from preschool to high school age who attended public schools. Clients varied in age from 2 to 16 with a mean age of 8.8 years. Eighty-two percent of the clients were males (n=27). Fifty-two percent of the clients were receiving all of their education in regular education (n=17), 18 percent received part of their education in a resource program (n=6), 12 percent received a large part of their education in a special education program (n=4), 9 percent were staffed into a preschool handicapped program (n=3), and another 9 percent were staffed into a special education program that was not specified (n=3). Sixty-four percent of the clients (n=21) had been evaluated for special education and 55 percent (n=18) had received special education services before the initiation of consultation. Fifty-five percent of the clients were referred to consultation for social/behavioral problems (n=18), 9 percent were referred for academic difficulties (n=3), and 36 percent were referred for a combination of behavioral and academic difficulties (n=12). The problems chosen for intervention were work completion (n=7), disruptive behavior (n=8), attention to task (n=6), noncompliance (n=5), math (n=2), self stimulatory behavior (n=2), inappropriate verbalizations (n=2), and truancy (n=1).

Dependent Variables

Initial Data Collection Form

Each consultant completed an Initial Data Collection Form during the RE-AIM behavioral consultation workshop (See Appendix C). Information obtained described such characteristics as number of years of experience in the field of education, number of years

of experience as a school psychologist, number of years of teaching experience, educational degree(s), percentage of time spent in special education, amount of time per week spent in consultation, preferred model of consultation, theoretical orientation, and prior training in behavior modification.

Interviewing Competency

The audiotapes submitted by participants were coded, using the adherence to behavioral consultation form (See Appendix D), by research assistants as to the extent to which the consultants met the following objectives for the Problem Identification Interview as delineated by Bergan (1977):

1. Obtain an operational definition of the target behavior
2. Identify the tentative strength (i.e., frequency, intensity, duration) of the target behavior
3. Identify the antecedent conditions surrounding the target behavior
4. Identify the consequent conditions surrounding the target behavior
5. Identify the situational conditions surrounding the target behavior
6. Summarize interview content to ensure accurate understanding of the consultee's concern
7. Discuss baseline data collection procedures
8. Identify a behavioral goal for the student
9. Set up an appointment for the second interview, the Problem Analysis Interview

A 3 point Likert scale (1= met, 2= partially met, and 3= unmet) was used to rate the degree to which each of these nine objectives was attained during the audiotaped consultation interviews. A total score was derived by summing the scores the consultants received on each of the objectives resulting in a total interviewing competency score. Consultants' scores can range from 9 to 27 with lower scores indicative of greater competency (Phillips, 1987).

Graduate research assistants were trained and supervised in coding the audiotapes. They obtained an intercoder reliability of 85 percent agreement (Phillips, 1987).

Consultee Satisfaction

The satisfaction with consultation questionnaire was mailed to teachers who served as consultees during the audiotaped interviews. A letter describing the intent of the study and a postage-paid return envelope was enclosed. A reminder postcard was sent to all consultees one week following the initial mailing of the survey to ensure a high response rate. A second letter, survey, and return envelope was sent to the consultees who had not responded within two weeks of the postcard mailing. An overall response rate of 94 percent was obtained with this procedure (Phillips, 1987). The questionnaire consisted of 26 items addressing four areas of interest. The items focused on the consultees' attitudes about special education programs, the utility of consultation services received from the school psychologist, the likelihood of the consultees' use of consultation services in the future, and specific attributes of the consultant with whom they interacted. A five point (1- strongly agree to 5- strongly disagree) Likert scale was used with 21 of the items to determine the extent to which the consultee agreed or disagreed with various statements. The remaining 5 items were in a multiple choice format. Items 1, 3, 4, 12, and 16 measured consultee's perception of the purpose of consultation in solving classroom problems. The effectiveness of the consultation process in solving the consultee's concern was assessed through items 6, 8, 9, and 10. Items 2, 5, 11, 15, 19, and 22 were related to the utilization of consultation services and the future benefits of this consultation experience. Satisfaction with behavioral consultation and with specific consultant variables were assessed by items 7 and 17 a-e. Additional items were included to obtain information about building level support for consultation (13, 14), consultee's prior training in behavioral techniques (18), and perceived effectiveness of prior consultation experiences (20, 21) (Phillips, 1987).

The following nine Likert scale items and one multiple choice item were combined to form a scale and used in the current study:

2. I feel better equipped to handle similar problems with students in the future as a result of my experience with consultation

5. I want to use consultation services in the future

6. As a result of consultation, the referral problem was resolved within my classroom

7. Overall, I was satisfied with my consultation experience

17. I was satisfied with the consultant's:

    a. ability to understand and empathize with my specific concern

    b. ability to stay on the topic (i.e., the target behavior) during the interview

    c. explanation of the consultation process

    d. explanation of my role and responsibilities as a consultee

    e. overall effectiveness in solving the problem I had referred

22. How likely are you to recommend consultation services to other teachers within your school?

These ten items were combined to form a scale called Consumer Satisfaction Questionnaire (CSQ). Descriptive data for the scale include a mean of 19.56 with a standard deviation of 6.91 and a range of 11 to 39. In order to determine the internal consistency reliability of the CSQ, coefficient alpha was calculated. Coefficient alpha is based on intercorrelations of all comparable parts of the same test. Coefficient alpha provides an indication of the proportion of variance in the scale score that is attributable to the true score and is one of the most important indicators of a scale's quality. Coefficient alpha can take on values from 0 to 1.0 (DeVellis, 1991). DeVellis (1991) suggests the following guidelines for coefficient alpha for research scales: below .60, unacceptable; between .60 and .65, undesirable; between .65 and .70, minimally acceptable; between .70

and .80, respectable; between .80 and .90, very good; and much above .90, consider shortening the scale. The coefficient alpha for the scale was .92 and the corrected item-total correlations ranged from .51 to .85. The inter-item correlations varied from .21 to .85 with a mean of .55. See Table E1 and E2 in Appendix E for the correlations between individual items of the consumer satisfaction questionnaire (CSQ) and additional psychometric information.

Items 18 and 20, which addressed consultee training in behavior modification/applied behavior analysis and consultees' previous experience with consultation, respectively, provided demographic information on the consultees, which was reported in the subjects section.

The remaining items of the satisfaction with consultation questionnaire were not included in this study because they involved questions about special education and principals' support for consultation. These questions were not deemed relevant to this study and were not believed to correlate meaningfully with the variables under investigation.

Client Behavior Change

Records (i.e., case summary report form) and graphs documenting the status of client behavior following intervention, if available, were used to determine client outcomes as a result of consultation. Outcomes were coded on the following five point Likert scale: Target behavior greatly improved (goal of consultation met)=1; Target behavior improved (improvements noted over baseline)=2; Uncertain about target behavior change (no data available about target behavior change)=3; Target behavior unchanged (same as baseline)=4; and Target behavior worse than baseline= 5. Information was gathered and the author determined the code which best described the outcome of consultation for each case. Cases also were coded as to whether or not they included a graph or chart of data. Only seven out of the thirty-three cases included a graph that documented client progress as

a result of consultation. All case outcome coding and interview process coding was done independently.

Perceived Treatment Integrity

After plan implementation, each consultant was asked to rate on the case summary report form the degree to which the consultees adhered to the treatment plan developed during the Problem Analysis Interview (PAI). This rating was made on a 9-point scale ranging from certain it was correctly implemented (1) to certain it was not implemented correctly (9). It should be noted that this measure was based on consultants' perceptions rather than observational data.

Perceptions of Client Behavior Change

After plan implementation, each consultant was asked to answer the following question, "In the consultee's opinion, was the plan responsible for any change?" on the case summary report form. Consultants responded to this questions in one of the following ways: yes, no, or not sure. The responses to this question were coded in the following ways: yes= 1, no= 3, and not sure= 2.

Data Collection

Each consultant met with at least one consultee and audiotaped the Problem Identification Interview (PII). Consultants employed behavioral consultation (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990).

The entire audiotapes were transcribed word for word and request-response sequences were coded. In all, 1222 request-response sequences were coded. The author and a practicing school psychologist, who was blind to the purpose of the study, coded the audiotapes. The author served as the primary coder and the school psychologist served as the inter-judge agreement coder. Raters were trained in the use of the Folger and Puck (1976) relational coding system by: reading the manual, discussing coding definitions, and coding sample consultation transcripts.

In order to assess intercoder reliability twenty percent or seven of the interview transcripts were randomly selected and coded independently by the author and a practicing school psychologist. Cohen's Kappa coefficients and simple agreement were calculated for the bids and the responses to bids. Cohen's Kappa (1960) is a useful statistic for measuring inter-rater agreement on categorical data and provides an estimate of agreement after chance agreement is excluded. Kappa coefficients vary from -1.00 to +1.00: a) when kappa is positive, the proportion of observed agreement is greater than the proportion of chance agreement; b) when kappa equals zero, the proportion of observed agreement is equal to the proportion of chance agreement; and c) when kappa is negative, the proportion of observed agreement is less than the proportion of chance agreement (Cohen, 1960). A kappa of .60 (Gelfand & Hartmann, 1975; Hartmann, 1977) to .70 (Sattler, 1988) is indicative of an acceptable level of agreement. Kappa measures the degree of consensus among raters, not the validity of the ratings.

For bids, an intercoder reliability of .75 was obtained using Cohen's Kappa, as well as 94% simple agreement. For responses, Kappa was .72, with 93% simple agreement. These kappa coefficients represent an acceptable level of inter-judge agreement (Gelfand & Hartmann, 1975; Hartmann, 1977; Sattler, 1988).

Independent Variable

The Folger and Puck (1976) request-centered relational coding system was used in this study to examine the relationship between consultants and consultees. Folger and Puck (1976) systematically samples from interviews by coding request-response sequences. Examples of requests or bids include: questions (e.g., "How often does the problem behavior occur?"), commands (e.g., "I want you to collect baseline data for one week."), and instructions (e.g., "Make a tally on this chart every time John talks out of turn."). Folger and Puck (1976) tracks relational communication along dominant-submissive and affiliative-hostile dimensions. There are three dimensions along which a request and its

response must be coded when using the Folger and Puck (1976) relational coding system. First, the type of request must be identified (i.e., request for action, permission, information, or opinion). Second, any modification of the type of questions listed above along an affiliative-hostile dimension must be coded. Finally, the response to the request must be coded as either rejecting, accepting, or evading the bid for dominance or submission which the request offers.

Requests are coded as either dominant or submissive. Requests that require another to take some action are coded as Dominant (D), while requests which seek permission to take some action are coded as submissive (S). An example of a dominant bid is "You will collect baseline data for 10 days so that we can establish the baseline rate of Jill's behavior." The following are examples of submissive bids: "What should I do when Billy has a temper tantrum?" and "Can I conduct a behavioral observation of Susie next week?".

Requests for information where the requester asks permission, puts the other in a one-up position and puts him/herself in a one-down position, or states that he or she needs the information are coded as submissive (e.g., "Would you want to tell me about Johnny's social skill problems?", " Is that okay?", "Can I observe in your classroom on Monday?"), while requests for information where the requester asks a question in such a way that the answer is already supplied or "fed" (e.g., "Don't you think John is making progress in reading?" or "Jamie is a first grader, right?") are coded as dominant-affiliative.

Dominant and submissive bids are coded further as affiliative (+) or hostile (-), depending on the presence of polite, friendly terms (e.g., please), terms of endearment (e.g., honey), and polite intonation or rude, unfriendly terms (e.g., damn), insults (e.g., jerk), and rude intonation. The variations of + and - are then added to the codes of S or D (e.g., D+, D-). When both an affiliative and a hostile term are present in a request, only the hostile term is coded. An example of a dominant-affiliative bid is "Please contact Jason's mother to get that information?". An example of a dominant-hostile bid is "Why can't you

figure out how to work with this child? ". None of the dominant or submissive bids advanced by the consultants or consultees in this study were hostile.

Some requests contain no elements of control and are coded as either + or -. Questions in the form of greetings (e.g., " How are you?") and compliments (e.g., "You have done a nice job of defining the problem") are coded as +. Insults (e.g., "You need to get more organized") in the form of questions or commands are coded as -. Since these pure forms of affiliation (+) and hostility (-) are not related to any of the research questions, they were not included in this study.

Responses to requests are coded as either accepted (1), rejected (0), or evaded (2). Response categories are defined by the type of request made. Acceptance of another's request involves agreeing to perform a requested action, giving or refusing to give permission, and answering or refusing to answer a question (e.g., "That is correct.", "Okay"). Rejection of another's bid is indicated by not performing the requested action or claiming not to have the power to give permission or the information needed to respond (e.g., "I don't know.", "I can't do that."). Another's request is evaded when the respondent equivocates or promises to do something unrelated to the requested action, asks a tangential question, grants an unrelated request, or fails to express an opinion (e.g., "I don't understand what you mean?", "Has Becky always gone to this school?"). Table 1 includes additional examples of the different types of bids and responses. (Readers are directed to Erchul and Chewning, 1990; Folger and Puck, 1976; Martens, Erchul, & Witt, 1992 for a more complete description of the Folger and Puck relational coding system and the coding criteria).

The validity of the Folger and Puck (1976) request-centered relational coding system has been documented by two separate lines of research. First, Puck (cited in Sillars & Folger, 1978) used a multidimension scaling procedure and found that raters' perceptions of sample questions were congruent with the placement of questions along the

dominant-submissive and hostile-affiliative dimensions as described in the Folger and Puck (1976) coding manual. Second, Ayres and Miura (1981) examined the construct and predictive validity of the Folger and Puck (1976) coding system. The Folger and Puck (1976) coding system demonstrated adequate convergent validity when used to code complementary transactions (e.g., one person gives and the other person takes). The correlation of the Folger and Puck (1976) relational coding system with other relational coding systems (e.g., Rogers & Farace, 1975) ranged from .53 to .83 with a mean of .72. The Folger and Puck (1976) demonstrated less than adequate convergent validity when symmetrical transactions (e.g., two people exchange the same type of behavior) were coded. In this situation, the correlations with the other coding systems ranged from .14 to .83 with a mean correlation of .27. Ayres and Miura (1981) reported that the Folger and Puck (1976) relational coding system has adequate discriminant validity when coding complementary interactions but not symmetrical interactions. In addition, Ayres and Miura (1981) found the Folger and Puck (1976) relational coding system to have high predictive validity as determined by its coding of a statistically significant percentage of interactions within incompatible dyads (those dyads in which both members are classified as either very dominant or very submissive) as symmetrical and within compatible dyads (those dyads in which one member is very dominant and the other member is very submissive) as complementary. Based on these findings, the Folger and Puck relational coding system has adequate content and construct validity as well as high predictive validity (Ayres & Miura, 1981; Sillars & Folger, 1978).

Procedure

Erchul and Schulte (1990) used the Rogers and Farace (1975) coding system to investigate the issue of how much of a consultation case needs to be coded in order to obtain reliable estimates of relational control in behavioral consultation. According to Erchul and Schulte (1990), for certain variables (e.g., dominance) the initial consultation

interview alone provides a reasonable, reliable sample of consultee and consultant behavior. There are four advantages to coding only the Problem Identification Interview (PII). First, it has been found to yield reliabilities above .9 for the variables of dominance and domineeringness and to result in small amounts of bias in the group mean. Second, it significantly reduces coding time and results in a reduction of the number of messages coded. Third, when only the PII is coded, transcription can begin immediately after the first interview. Fourth, use of the PII means that incomplete consultation cases can be used in research without sacrificing the generalizability of results. This fourth advantage is important because a large number of behavioral consultation cases do not progress through all three of the interviews (Bergan & Tombari, 1976; Erchul, 1987). In this study, unlike the studies just cited, only complete cases were used.

Table 1. Examples of Bids and Responses Coded with Folger and Puck (1976) Relational Communication Coding System

Speaker	Message	Code	Interpretation
Consultant	"You will use this data collection form to collect baseline."	D	Dominant Bid
Consultee	"Okay."	1	Bid Accepted
Consultant	"So you are going to keep track of how many times Jared gets out of his seat	D	Dominant Bid
Consultee	"That's right."	1	Bid Accepted
Consultant	"You think that Krista should repeat the 2nd grade, Don't you?"	D+	Dominant-affiliative
Consultee	"No."	0	Bid rejected
Consultant	"Would you talk to his 1st grade teacher to see how she dealt with this problem?"	D+	Dominant-affiliative
Consultee	"I can't do that."	0	Bid rejected
Consultee	"How should I talk to Jeff about his problem?"	S	Submissive Bid
Consultant	"What do you mean?"	2	Bid evaded
Consultee	"How should I collect the baseline data?"	S	Submissive Bid
Consultant	"What methods do you usually use?"	2	Bid evaded

The following five decision rules, based on Erchul and Chewning (1990) and Erchul et al. (1995), were used in this study to increase intercoder agreement: a) bids which are embedded within lengthy summary statements to which no response is provided were not coded; b) when two or more codable bids occurred during a single message, only the most dominant bid was coded; c) requests for action (e.g., instructions) that use "we" or "us" were coded as dominant-affiliative rather than dominant; d) if a question presents three or more behavioral options, it was coded as submissive; if it presents two or fewer options, it was coded as dominant-affiliative; and e) messages that express greeting or goodwill that take the form of a question and rhetorical questions were not coded.

Three additional decision rules were used in this study: a) when an individual responded to a question with another question, it was coded as evasive unless the question was seeking clarification so that the listener could answer the question that was asked (e.g., Q: "What happens after Johnny hit another student?" A: "Do you want to know what I do or what the student does or both?"). When a clarifying question was asked in response to a question, it was coded as other; b) requests that did not fit into another category were coded as other (e.g., "Do you understand what I mean?"); and c) if a response occurred before the entire question had been asked, the bid was considered to be completed at the end of the series of partial questions so that the bid/response sequence was evaluated in its entirety.

Research Questions

Four specific research questions and hypotheses were addressed in this study:

1. How do measures of consultant control and consultee control in behavioral consultation relate to consultees' satisfaction with consultation?

1a. How do consultant dominant requests relate to consultees' satisfaction with consultation?

1b. How do consultant dominant-affiliative requests relate to consultees' satisfaction with consultation?

1c. How do consultant submissive requests relate to consultees' satisfaction with consultation?

1d. How do consultee bids relate to consultees' satisfaction with consultation?

Hypothesis: Consultant dominant-affiliative requests will be positively related to consultees' satisfaction with consultation, while consultant dominant and submissive requests will be negatively related to consultees' satisfaction with consultation. Consultee dominant, submissive, and dominant-affiliative requests will all be negatively correlated with consultees' satisfaction with consultation.

2. How do measures of consultant and consultee control in behavioral consultation relate to client behavior change?

Hypothesis: Client behavior change will be related to consultant control of the consultation interaction by use of dominant-affiliative requests and consultee use of submissive bids and acceptance of consultants' requests.

3. How do measures of consultant control and consultee control in behavioral consultation relate to treatment integrity?

3a. How does consultant use of dominant requests relate to treatment integrity?

3b. How does consultant use of dominant-affiliative requests relate to treatment integrity?

3c. How does consultant use of submissive requests relate to treatment integrity?

3d. How do consultee requests relate to treatment integrity?

Hypothesis: Treatment integrity will be positively related to consultant dominant-affiliative requests and submissive requests and negatively related to consultant dominant requests. Treatment integrity will be positively related to consultee submissive bids and negatively related to consultee dominant and consultee dominant-affiliative bids.

4. How do measures of consultant control and consultee control in behavioral consultation relate to perceptions of client behavior change?

4a. How does consultant use of dominant requests relate to perceptions of client behavior change?

4b. How does consultant use of dominant-affiliative requests relate to perceptions of client behavior change?

4c. How does consultant use of submissive requests relate to perceptions of client behavior change?

4d. How do consultee requests relate to perceptions of client behavior change?

Hypothesis: Consultant dominant-affiliative requests will be positively related to perceptions of client behavior change. Consultant use of dominant requests and submissive requests will be negatively related to perceptions of client behavior change. Consultee use of submissive bids will be positively related to perceptions of client behavior change, while consultee use of dominant-affiliative and dominant bids will be negatively related to perceptions of client behavior change.

RESULTS

The presentation of the results is organized around the research questions presented in the previous section. This chapter presents the data analysis procedures used and the results of these procedures. Following the presentation of the descriptive statistics for all measures, the correlational and ANOVA results are provided.

Data analysis consisted of descriptive statistics, correlational analyses, and parametric statistical analysis of group data. Four cases were excluded from the correlational analyses because the consultant and consultee failed to implement an intervention during consultation. For two of these cases the reason given for not implementing an intervention was that the student moved, the reason the other two cases did not implement an intervention is unknown.

Descriptive Statistics

Outcome Measures

Consultation effectiveness was operationally defined by four outcome measures collected after consultation was completed and the rating of interviewing competency. These four outcome measures were: a) consultee satisfaction, b) client behavior change, c)perceived treatment integrity, and d) perceptions of client behavior change. The means and standard deviations of these outcome measures were calculated. Table 2 presents the means and standard deviations for the Consumer Satisfaction Questionnaire.

Overall, consultees reported that they were satisfied with consultation on the ten item consumer satisfaction questionnaire (CSQ). The mean for the scale was 19.56, with a standard deviation of 6.91. The range of possible scores for the CSQ Total score is 10 to 49, with lower scores indicating higher satisfaction with consultation. The range of possible scores for each of the items on the CSQ is 1 to 5, except for item 22, which is in a multiple choice format with four choices.

The consultees were neutral about the degree to which the problem was resolved as per their responses to item 6 on the CSQ. The mean for item 6 on the CSQ was 2.97 with a standard deviation of .94. Sixty-two percent of the consultees (n=18) rated this item with a three or more. The range of possible scores on this item is 1 to 5 with lower scores indicating that the problem was resolved.

Table 2. Consumer Satisfaction Questionnaire Means and Standard Deviations

Item	N	Mean	SD
2. Skill acquisition	29	2.38	.98
5. Use of consultation in future	29	1.79	.98
6. Resolution of classroom problem	29	2.97	.94
7. Overall satisfaction	29	2.14	1.13
17a. Consultant empathy	29	1.62	.73
17b. Consultant focus on behavior	29	1.45	.57
17c. Consultant explanation of the process	29	1.76	.95
17d. Consultant explanation of role	29	1.66	.67
17e. Overall consultation effectiveness	29	2.00	.89
22. Future recommendations	27	1.78	.85
Total scale score	27	19.56	6.91

Client behavior change was measured on a five point Likert scale (1= target behavior greatly improved to 5= target behavior worse than baseline), with lower scores indicative of greater client improvement. The mean score for client improvement was 2.14 with a standard deviation of 1.06. The behavior of sixty-six percent of the clients (n= 19) improved in relation to their baseline performance (i.e., obtained a score of 1 or 2). Thus, client behavior generally improved as a result of consultation.

Consultants generally reported high treatment integrity. The mean for the treatment integrity item was 3.14 with a standard deviation of 2.08. The range of possible scores on this item was 1 to 9, with lower scores indicative of higher treatment integrity. For seventy-two percent of the cases (n=21), a score of 3 or less was reported on this item.

On the perceptions of behavior change item, consultants generally reported that

consultees believed that client behavior improved as a result of intervention (mean= 1.48, SD= .57). The scale for this item was from 1 to 3, with lower scores indicating greater improvement. Fifty-five percent of the consultants (n=16) reported that client behavior changed as a result of consultation, forty-one percent of the consultants (n=12) reported that they were not sure if client behavior changed as a result of consultation, and only one consultant reported that client behavior did not change as a result of consultation.

When comparing consultees' perceptions of problem resolution on item 6 of the CSQ and consultants' ratings of client behavior change (i.e., the perceptions of behavior change item), it appears that the consultants were slightly more positive than consultees regarding student improvement as a result of the intervention that was implemented during consultation.

Consultants generally met or partially met the objectives of the Problem Identification Interview of behavioral consultation. The mean of the Total Interviewing Competency score was 13.5 with a standard deviation of 3.6. The means and standard deviations for the 9 items that comprise the Total Interviewing Competency score are presented in Table 3. The total interviewing competency score ranged from 9 to 23, with lower scores indicative of higher interviewing competency.

Despite the fact that consultants generally met or partially met the objectives of the PII of behavioral consultation, six of the 29 (21%) consultants did not follow the appropriate sequence of behavioral consultation interviews. For example, three of the consultant-consultee dyads held the Problem Analysis Interview (PAI) and the Plan Evaluation Interview (PEI) on the same day and one of the consultation dyads held the PII and PAI on the same day. In addition, at least two of the dyads implemented the consultation intervention following the initial interview (PII). Further, the interview sequence followed by an additional two dyads is unknown because interview dates were not indicated on the case summary report form.

Table 3. Problem Identification Interview Objectives Means and Standard Deviations

Objective	N	Mean[1]	SD
1. Behavioral definition	29	1.48	.79
2. Tentative strength	29	1.59	.78
3. Antecedent events	29	1.59	.73
4. Consequent events	29	1.45	.74
5. Situational events	29	1.45	.69
6. Behavioral goal	29	1.62	.78
7. Summary statements	29	1.55	.83
8. Data collection	29	1.24	.58
9. Next appointment	29	1.48	.87
Total interviewing competency score	29	13.45	3.56

[1] On a scale where 1 = met, 2 = partially met, and 3 = unmet

The length of each of the problem identification interviews was determined. The problem identification interviews varied in length from 7 to 40 minutes with a mean of 18.28 minutes and a standard deviation of 9.11.

The number of weeks that the intervention was implemented also was reported. The amount of time the intervention was implemented before the Problem Evaluation Interview (PEI) was held varied from 1 to 14 weeks with a mean of 4.34 weeks and a standard deviation of 3.22. Fifty-seven percent of the interventions were implemented for three weeks or less.

Measures of Control in Consultation

The Folger and Puck (1976) request centered relational coding system was used to code all requests as either dominant (D), dominant-affiliative (D+), submissive (S), or other (O) and all responses to requests as either accepting (A), evading (E), rejecting (R),

or other (Oth). The four types of requests (i.e., dominant, dominant-affiliative, submissive, other) and four types of responses (i.e., accept, reject, evade, other) were tabulated separately for consultants and consultees. The total number of consultant and consultee bids also was calculated. Table 4 presents the frequencies and percentages of the four bid types and Table 5 presents the frequencies and percentages of the four response types utilized by consultants and consultees during the Problem Identification Interviews.

Table 4. Means and Standard Deviations for Consultant and Consultee Bid Types

Consultant Bids	M	SD	Consultee Bids	M	SD
Dominant	5.3%	4.2	Dominant	1.0%	4.5
	(1.97)	(1.51)		(.03)	(.17)
Dominant-affiliative	82.9%	7.4	Dominant-affiliative	21.8%	31.9
	(29.58)	(11.64)		(.27)	(.45)
Submissive	8.7%	4.4	Submissive	63.4%	34.6
	(2.91)	(1.68)		(.94)	(1.09)
Other	3.1%	3.7	Other	13.8%	27.5
	(1.15)	(1.54)		(.18)	(.47)

Note. Entries in parentheses are means and standard deviations based on frequency data.

The consultants relied mainly on dominant-affiliative bids, with 82.9 percent of the consultants' bids coded into this category. The high percentage of dominant-affiliative bids advanced by the consultants in the present study is encouraging because questions that clarify earlier information (e.g., "So attention from classmates appears to be maintaining her out of seat behavior, right?"), have been shown to be helpful in facilitating the process of behavioral consultation (Bergan & Tombari, 1975, 1976). The consultees relied mainly on submissive bids, with 63.4 percent of consultees' bids coded into this category.

Table 5. Means and Standard Deviations for Consultant and Consultee Responses

Consultant Responses	M	SD	Consultee Responses	M	SD
Consultee bids rejected	8.8%	16.1	Consultant bids rejected	2.0%	2.2
	(.15)	(.36)		(.79)	(.96)
Consultee bids accepted	79.6%	24.6	Consultant bids accepted	87.9%	7.5
	(1.09)	(1.26)		(30.91)	(10.87)
Consultee bids evaded	11.7%	21.0	Consultant bids evaded	8.7%	6.5
	(.18)	(.47)		(3.39)	(3.23)
Consultee bids other	0.0%		Consultant bids other	1.3%	2.1
	(0)			(.52)	(.87)

Note. Entries in parentheses are means and standard deviations based on frequency data.

The ratio of consultant dominant-affiliative bids to consultee dominant-affiliative bids was 110 to 1 for this sample of consultants. The ratio of consultant dominant bids to consultee dominant bids was 66 to 1. On the average, consultants made a total of 35.6 bids (SD= 13.6) and consultees made a total of 1.4 (SD= 1.5). Thus, consultants advanced 25 times more bids than consultees. Consultants in the Erchul et al. (1995) study made an average of 37.8 bids and consultees made a total of 3.24 bids during the consultation interaction for a ratio of 12:1. Therefore, the consultants in this study advanced a similar number of bids as the consultants in the Erchul et al. (1995) study, while the consultees in this study advanced fewer bids than those in the Erchul et al. (1995) study. Since consultants tend to control the nature and course of consultation by making requests of the consultees and consultees tend to cooperate by making few requests of their own , these results are consistent with the assertion that consultants direct or control the consultation interaction.

Eighty-eight percent of the consultant bids were accepted by the consultee,

compared to nearly 80 percent of consultee bids that were accepted by the consultants. Only 2.0 percent of the consultant bids were rejected while 9 percent of the consultee bids were rejected. Nine percent of the consultants' bids were evaded while 12 percent of the consultees' bids were evaded. These results suggest that most of the consultants' and consultees' bids were accepted, while few of the consultants' and consultees' bids were rejected or evaded. Analysis of variance procedures revealed that there were no significant differences between consultants and consultees regarding the percentage of bids evaded or accepted. A significant difference, however, was noted between consultants and consultees regarding the percentage of bids rejected.

These findings lend support to the notion that consultation is a cooperative endeavor in which the consultee follows the lead of the consultant through complying with requests and making few requests of the consultant. In this sample, 13 of the consultees did not make any requests of the consultant during the PII. The high use of dominant-affiliative bids by the consultants lends support to the fact that consultants were following behavioral consultation (Bergan & Kratochwill, 1990; Kratochwill & Bergan, 1990), which involves the establishment and maintenance of interview control in order to achieve the objectives of behavioral consultation (Bergan & Tombari, 1975, 1976).

Correlational Analyses

The Relationship Between the Outcome Variables

Pearson correlations (two-tailed) were calculated to determine the relationship between the four outcome variables (See Table 6). Results indicate that the variables were not significantly related, with the exception of the perceptions of behavior change item and the measure of client behavior change, which were significantly related ($r=.36$, $p=.05$).

Pearson correlations (two-tailed) were calculated to determine the relationship between the four outcome variables, the measure of interviewing competency, and the length of time the intervention was implemented. Interviewing competency was not

Table 6. Correlations Between Dependent Variables

Dependent Variables	Consultee Satisfaction	Perceived Treatment Integrity	Perceptions of Client Behavior Change	Client Behavior Change
Consultee Satisfaction	--	.04	-.11	.16
Perceived Treatment Integrity	.04	--	.24	-.11
Perceptions of Client Behavior Change	-.11	.24	--	.36*
Client Behavior Change	.16	-.11	.36	--

* p=.05, two-tailed

significantly correlated with the outcome variables. The following correlations were obtained between interviewing competency and the outcome variables: consultee satisfaction (r=.06, p=.78), consultee perception of problem resolution (r=.06, p=.77), perceptions of client behavior change (r=-.20, p=.31), perceived treatment integrity (r=-.01, p=.95), and client behavior change (r=.24, p=.21). The length of time the intervention was implemented was not significantly related to the outcome measures. The following correlations were obtained between the length of time the intervention was implemented and the outcome measures: consultee satisfaction (r=-.19, p=.35), consultee perception of problem resolution (r=-.28, p=.15), perceptions of behavior change (r=-.29, p=.14), perceived treatment integrity (r=-.26, p=.18), and client behavior change (r=.14, p=.48).

The Relationship Between the Consultant and Consultee Independent Variables

Pearson correlations (two-tailed) were calculated to determine the relationship between the consultant independent variables. Consultant percent dominant-affiliative bids

were negatively related to consultant percent dominant bids ($r=-.64$, $p<.001$) and consultant percent submissive bids ($r=-.71$, $p<.001$). Therefore, the more dominant-affiliative bids advanced by the consultant the fewer dominant and submissive bids advanced by the consultant and the more dominant or submissive bids advanced the fewer dominant-affiliative bids advanced. Consultant percent submissive bids were not significantly related to consultant percent dominant bids ($r=.12$, $p=.55$).

Pearson correlations (two-tailed) were calculated to determine the relationship between the consultee independent variables. Consultee percent dominant bids were not significantly related to consultee percent dominant-affiliative bids ($r=-.01$, $p= .96$) or consultee percent submissive bids ($r=-.03$, $p= .91$). Consultee percent submissive bids were significantly related to consultee percent dominant-affiliative bids ($r=-.67$, $p=.002$). Thus, the more dominant-affiliative bids advanced by the consultee the fewer submissive bids advanced by the consultee. Further, the more submissive bids advanced by the consultee the fewer dominant-affiliative bids advanced by the consultee.

The high correlation among the consultant dominant-affiliative bids and the consultant dominant and submissive bids is problematic in that it may result in multicollinearity. Multicollinearity is undesirable for three main reasons. First, if the independent variables are highly correlated with each other, none will demonstrate a substantial unique contribution to the prediction of the dependent variables. Second, since estimates of population partial regression coefficients are highly unstable, the probability of obtaining statistically significant results will be decreased. Finally, when correlations are high among the independent variables, computer algorithms for computing regression analyses may result in unknown errors (Wampold & Freund, 1987). The consultee dominant-affiliative bids and submissive bids also were highly correlated. In order for multicollinearity to be a problem, the independent variables and dependent variables must be significantly correlated. Since the dependent and independent variables generally were

not significantly correlated, multicollinearity is not a concern in this study.

Consultant percent dominant and consultee percent dominant-affiliative bids were significantly correlated (r=.48, p=.04). Thus, the more dominant bids advanced by the consultants the more dominant-affiliative bids advanced by the consultees. Consultant percent dominant-affiliative bids was also significantly correlated with consultee percent dominant-affiliative bids (r=-.55, p=.02). The more dominant-affiliative bids advanced by the consultants the fewer dominant-affiliative bids advanced by the consultees. (See Appendix F for the correlation matrix for the consultant and consultee independent variables).

Correlations Between Consultant Process Variables and Interview Competency

Pearson correlations (two-tailed) were calculated to determine the relationship between the consultant process variables and interviewing competency. The individual consultant bid types and total bids were not significantly related to interviewing competency. The following correlations were obtained between the individual bid types and the interviewing competency score: dominant bids (r=-.07, p=.72), dominant-affiliative bids (r=-.16, p=.40), and submissive (r=.30, p=.12). The correlation between consultant total bids and the interviewing competency score was -.22 (p=.24).

The Relationship Between Consultant and Consultee Bids and the Outcome Variables

Folger and Puck (1976) coding category frequencies were converted to percentages of total bids and percentages of total responses prior to data analysis. Percentages were used in data analysis because of differences in interview length across consultant-consultee dyads.

Pearson correlations (one-tailed) were calculated to determine the relationship between the types of consultant bids and consultee bids (i.e., dominant, dominant-affiliative, and submissive) and the four outcome variables. The types of consultant bids and consultee bids as well as consultant and consultee total bids were correlated with the

four outcome measures: consultee satisfaction, client behavior change, perceived treatment integrity, and perceptions of client behavior change. Tables 7 and 8 present the specific correlations between consultant measures of control and consultee measures of control, respectively, and the dependent variables.

Table 7. Correlations Between Consultant Process Variables and Dependent Variables

Bid Type	Consultee Satisfaction	Perceived Treatment Integrity	Client Behavior Change	Perceptions of Client Behavior Change
Percent Dominant	.16	-.18	.03	-.27
Percent Dominant-affiliative	-.19	.17	.09	.43 **
Percent Submissive	.22	-.18	-.14	-.49 **
Total Count	.37 *	.14	.14	.21

* p=.05, one-tailed ** p=.01, one-tailed

Multiple linear regression procedures were also used to determine whether the independent variables (i.e., dominant, dominant-affiliative, submissive bids advanced by the consultants and consultees) were significantly related to the dependent variables (e.g., CSQ Total). In these analyses, dominant, dominant-affiliative, and submissive bids advanced by the consultants and consultees served as the independent variables and were used to predict consultee satisfaction, client behavior change, perceived treatment integrity, and perceptions of client behavior change. No assumptions were made about the order of importance of these three consultant and consultee bid types; thus, the independent

Table 8. Correlations Between Consultee Process Variables and Dependent Variables

Bid Types	Consultee Satisfaction	Perceived Treatment Integrity	Client Behavior Change	Perceptions of Client Behavior Change
Percent Dominant	.10	.05	.22	.28
Percent Dominant-affiliative	.01	-.17	.05	-.40*
Percent Submissive	.03	.28	.17	.35
Total Count	.47**	.34*	-.04	-.08

* P=.05, one-tailed, ** p=.01, one-tailed

variables were entered simultaneously into the regression equation. The intention in conducting the regression analyses was to determine whether a significant portion of the variance in the dependent variables could be explained by the independent variables.

Question 1. How do measures of consultant control and consultee control in behavioral consultation relate to consultee satisfaction with consultation?

Consultant measures of control (e.g., dominant bids) were not significantly related to consultee satisfaction with consultation. Consultant total bids, however, was significantly related to consultee satisfaction with consultation ($r=.37$, $p=.03$). The more bids consultants advanced, regardless of type, the less satisfied the consultees were. The total number of bids advanced by the consultants was significantly correlated ($r=.78$, $p<.001$) with the length of the problem identification interview. This finding suggests that the longer the consultation interview, the less satisfied the consultees were with the interaction. Therefore, consultants should be sensitive to teacher time constraints and

monitor the length of consultation interviews. Consultants must strive to efficiently meet teachers' needs as well as the objectives of consultation interviews.

Consultee measures of control (e.g., submissive) were not significantly related to consultee satisfaction. However, consultee total bids was significantly related to consultee satisfaction with consultation (r=.47, p=.01). The more bids advanced by the consultee the less satisfied they were with the consultation experience. Since consultee total bids and the length of the problem identification interview were found to be positively related (r=.60, p=.001), this finding suggests, once again, that the longer the consultation interview, the less satisfied the consultees were with the consultation experience.

The multiple regression analysis for consultants resulted in a nonsignificant R^2 of .07 [F(3,23)=.6056, p=.62]. The bids (e.g., dominant-affiliative) advanced by the consultants did not explain a significant proportion of the variance in consultee satisfaction with consultation. (See Appendix G for the multiple regression tables).

The multiple regression analysis for consultees resulted in a nonsignificant R^2 of .01 [F(3,14)=.0536, p=.98]. Hence, the bids (e.g., dominant-affiliative) advanced by the consultees did not explain a significant proportion of the variance in consultee satisfaction with consultation.

Question 2. How do measures of consultant and consultee control in behavioral consultation relate to client behavior change?

Consultant measures of control (e.g., dominant-affiliative bids) were not significantly related to client behavior change. In addition, consultee measures of control (e.g., submissive) and total bids (a measure of consultee control in behavioral consultation) were not significantly related to client behavior change. Further, consultee acceptance of consultant requests was not significantly related to client behavior change (r=.06, p=.78).

The multiple regression analysis for consultants resulted in a nonsignificant R^2 of .02 [F(3,25)=.1963, p=.90]. Therefore, the bids advanced by the consultants did not

explain a significant proportion of the variance in client behavior change.

The multiple regression analysis for consultees resulted in a nonsignificant R^2 of .14 [F(3,15)=.7907, p=.52]. The bids advanced by the consultees did not explain a significant proportion of the variance in client behavior change.

Question 3. How do measures of consultant control and consultee control in behavioral consultation relate to treatment integrity?

Consultant measures of control (e.g., dominant-affiliative bids) were not significantly related to treatment integrity. Consultee measures of control (e.g., dominant-affiliative bids) were not significantly related to treatment integrity. Consultee total bids (a measure of consultee control in behavioral consultation based on frequency data), however, was significantly related to treatment integrity (r=.34, p=.03). Thus, the more bids advanced by the consultee the less likely the consultant was to report that the plan was implemented with integrity. Again, this finding suggests that the longer the consultation interview the less likely the consultee is to implement the intervention with integrity. This may be due to decreased satisfaction with the consultation interaction and the amount of time that has been devoted to consultation.

The multiple regression analysis for consultants resulted in a nonsignificant R^2 of .07 [F(3,25)=.6334, p=.60]. The bids advanced by the consultants did not explain a significant proportion of the variance in treatment integrity.

The multiple regression analysis for consultees resulted in a nonsignificant R^2 of .08 [F(3,15)=.4606, p=.71. Thus, the bids advanced by the consultees did not explain a significant proportion of the variance in treatment integrity.

Question 4. How do measures of consultant control and consultee control in behavioral consultation relate to perceptions of client behavior change?

Dominant bids advanced by the consultant were not significantly related to perceptions of client behavior change (r=-.27, p=.16). However, consultant percent dominant-affiliative bids was significantly related to perceptions of client behavior change (r=.43, p=.02). The more dominant-affiliative bids used during the PII the more likely the consultant was to report that the client did not improve as a result of intervention. This result is in the opposite direction to the one that was proposed, based on prior literature. This finding could mean that the consultees were resentful of the consultants' use of dominant-affiliative bids when this talk of affiliation (e.g., "We need to collect data") was not accompanied by actual assistance. This resentment on the part of the consultees may have resulted in the consultees failing to implement the interventions developed during consultation. Consultant percent submissive bids also was significantly related to perceptions of client behavior change (r=-.49, p=.01). Thus, the more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed as a result of intervention. Therefore, the use of submissive bids by consultants may have lead to more active participation of the consultees in the consultation process and through this participation resulted in more effective interventions being implemented and positive client outcomes. Consultee dominant and submissive bids were not significantly related to perceptions of client behavior change. Consultee percent dominant-affiliative bids was significantly related to perceptions of client behavior change (r=-.40, p=.04). Therefore, the more dominant-affiliative bids advanced by the consultee the more likely the clients' behavior was perceived to have changed as a result of intervention. The use of dominant-affiliative bids by the consultees may have resulted in the consultees feeling empowered and, thus, resulted in the implementation of effective interventions.

The multiple regression analysis for consultants resulted in a significant R^2 of .29.

The consultant independent variables (i.e., dominant, dominant-affiliative, submissive bids) accounted for 29 percent of the variance in perceptions of client behavior change [F(3,25)=3.41, p=.03]. The bids advanced by consultants explained a significant proportion of the variance in perceptions of client behavior change. Percent submissive bids, in particular, was significantly related to perceptions of client behavior change and accounted for 10.8 percent of the variance (semi-partial r= -.33) in perceptions of client behavior change. Thus, the more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed as a result of intervention.

The multiple regression analysis for consultees resulted in a nonsignificant R^2 of .25 [F(3,15)= 1.67, p=.22]. The bids advanced by the consultees did not explain a significant proportion of the variance in perceptions of client behavior change.

Correlations Between Bids and the Outcome Measures by Consultant Gender

Pearson correlations (two-tailed) were calculated separately for male and female consultants to determine the relationship between consultant bids and the four outcome variables for males and females. The types consultant bids as well as total bids for males and females were correlated with the four outcome measures: consultee satisfaction, client behavior change, treatment integrity, and perceptions of client behavior change. Tables 9 and 10 present the specific correlations between female consultant measures of control and male consultant measures of control, respectively, and the dependent variables.

For female consultants, a significant relationship was found between submissive bids and client behavior change (r=-.68, p< .01). The more submissive bids made by female consultants the more likely the clients' behavior changed as a result of the intervention. There were no other significant correlations between the bid types and client behavior change for female consultants and none of the correlations between bid types and client behavior change were significant for male consultants.

Table 9. Correlations Between Female Consultant Process and Dependent Variables

Bid Types	Consultee Satisfaction	Perceived Treatment Integrity	Client Behavior Change	Perceptions of Client Behavior Change
Percent Dominant	.40	-.38	.05	-.30
Percent Dominant-affiliative	-.43	.10	.34	.51*
Percent Submissive	.13	-.10	-.68**	-.60**
Total Count	.65**	.10	.27	.16

* p=.05, two-tailed, p=.01, two-tailed

Table 10. Correlations Between Male Consultant Process and Dependent Variables

Bid Types	Consultee Satisfaction	Perceived Treatment Integrity	Client Behavior Change	Perceptions of Client Behavior Change
Percent Dominant	-.10	.29	-.11	-.22
Percent Dominant-affiliative	-.06	.06	.16	.33
Percent Submissive	.38	-.19	.11	-.37
Total Count	-.26	.04	.24	.30

For female consultants, a significant relationship was found between submissive bids and perceptions of client behavior change ($r=-.60$, $p< .01$) and dominant-affiliative bids and perceptions of client behavior change ($r=.51$, $p<.05$). The more submissive bids advanced by the female consultants the more likely the clients' behavior was perceived to have changed. Further, the more dominant-affiliative bids advanced by females during the PII, the less likely the clients' behavior was perceived to have changed. These results are in the opposite direction to the hypothesized direction. There were no other significant correlations between the bid types and perceptions of client behavior change for female consultants and none of the correlations between bid types and perceptions of client behavior change were significant for male consultants.

There were no significant correlations between the bid types and treatment integrity for female or male consultants. For female consultants, a significant relationship was found between total bids and consultee satisfaction with consultation ($r=.65$, $p< .01$). Thus, the more bids, regardless of type, advanced by the consultant the less satisfied the consultees were with consultation. The number of bids advanced by the consultant is one indicator of the length of the interview, thus, this finding could mean that the longer the consultation interview the less satisfied the consultee was with the interaction. Therefore, consultants should be sensitive to teacher time constraints and monitor the length of consultation interviews. None of the individual bid types were significantly related to consultee satisfaction for female or male consultants.

The findings reported for female consultants are consistent with the findings reported for the entire sample, with one exception (e.g., correlation between submissive bids and client behavior change). These results were all in the opposite direction to the hypothesized direction, based on the prior research.

Multiple regression analyses were used to test whether the predictors (e.g.,

dominant-affiliative bids) were differentially related to the outcome variables (e.g., consultee satisfaction) for male and female consultants. A multiplicative interaction term was created for each bid type by multiplying the individual bid types by the consultant gender variable resulting in the creation of three interaction terms (i.e., gender by dominant bid, gender by dominant-affiliative bid, gender by submissive bid). These interaction terms were then entered into the multiple regression equation after the bid variables and consultant gender variable were entered. These analyses resulted in nonsignificant findings in all but one situation.

There was not a gender by dominant bid interaction for consultee satisfaction [$F(1,23)=1.67$, $p=.21$]; client behavior change [$F(1, 25)=.1756$, $p=.68$]; treatment integrity [$F(1,25)=2.99$, $p=.10$]; and perceptions of client behavior change [$F(1, 25)=.0005$, $p=.98$]. In addition, there was not a gender by dominant-affiliative bid interaction was for consultee satisfaction [$F(1,23)= 1.13$, $p=.30$]; client behavior change [$F(1,25)=.0646$, $p=.80$]; treatment integrity [$F(1,25)=.0203$, $p=.89$]; and perceptions of client behavior change [$F(1,25)=.1022$, $p=.75$]. There was not a gender by submissive bid interaction for consultee satisfaction [$F(1,23)=.2200$, $p=.64$]; treatment integrity [$F(1,25)=.0116$, $p=.92$]; or perceptions of client behavior change [$F(1,25)=.4080$, $p=.53$]. Based on these nonsignificant interactions, one can conclude that the relationship between the individual bid types and the outcome measures generally is not significantly different for males and females. There was a gender by submissive bid interaction, however, for client behavior change [$F(1,25)=4.09$, $p=.05$]. The relationship between submissive bids and client behavior change is, therefore, different for males and females. Due to this significant finding, multiple regression analyses were run separately for males and females with client behavior change as the dependent variable and percent submissive bids as the independent variable. These analyses resulted in a significant R^2 of .46 [$F(1,15)=13.01$, $p=.003$] for females and a nonsignificant R^2 of .01 [$F(1,10)=.1210$,

p=.74] for males. These results indicate that submissive bids account for a significant proportion of the variance in client behavior change for female consultants, but not for male consultants. Female consultants who made more submissive bids, had cases in which client change was enhanced. This finding suggests that submissive bids are more effective for female consultants than male consultants.

Correlations Between Consultee Demographic Variables and Consultation Outcomes

Pearson correlations (two-tailed) were calculated to determine the relationship between consultee demographic variables and the four outcome variables. Correlations between the number of years of teaching experience and consultation outcomes were examined because of the possibility that consultees' teaching experience might influence outcomes. Overall, the teacher consultees were quite experienced. The number of years of consultee teaching experience was not significantly related to consultee satisfaction (r=.23, p=.33), consultees' perceptions of problem resolution (r=.19, p=.42), perceptions of client behavior change (r=-.12, p=.62), or treatment integrity (r=.14, p=.56). The number of years of consultee teaching experience, however, was significantly related to client outcome (r=-.42, p=.05). Thus, the more teaching experience the consultee had, the more likely the client's problem improved as a result of behavioral consultation. More experienced teachers were more likely to implement effective interventions or make classroom modifications that resulted in client behavior change than less experienced teachers.

Correlations between consultees' training in behavior modification and consultation outcomes as well as between the effectiveness of previous consultation experiences and consultation outcomes were examined because of the possibility that these variables might influence outcomes. Consultee training in behavior modification was not significantly related to client behavior change (r=.16, p=.41), consultee satisfaction (r=-.13, p=.52), or treatment integrity (r=.002, p=.99). Consultee training in behavior modification was, however, significantly related to perceptions of client behavior change (r=.49, p=.001).

Thus, the more training consultees had in behavior modification the more likely the clients' behavior was perceived to have changed. The effectiveness of consultees' previous consultation experience was not significantly related to the outcome measures. The following are the correlations between the effectiveness of consultees' previous consultation experience and client behavior change ($r=-.09$, $p=.65$), consultee satisfaction ($r=.31$, $p=.12$), perceptions of client behavior change ($r=-.01$, $p=.94$), and treatment integrity ($r=.22$, $p=.25$).

Correlations Between Consultant Years of Experience and Outcome Measures

Pearson correlations (two-tailed) were calculated to determine the relationship between the years of experience of the consultants and the outcome measures. Correlations between the number of years of experience as school psychologists and consultation outcomes were examined because of the possibility that consultants' years of experience might influence outcomes. Overall, the consultants were quite experienced. The number of years of consultant experience as a school psychologist was not significantly related to consultee satisfaction ($r=-.04$, $p=.85$),perception of client behavior change ($r=-.05$, $p=.81$),treatment integrity ($r=-.01$, $p=.97$), and client behavior change ($r=.16$, $p=.42$). Further, number of years of experience as a school psychologist was not significantly related to interviewing competency ($r=.12$, $p=.55$).

Analysis of Variance

Analysis of variance (ANOVA) was used to compare consultee and consultant overall percentage of bids and responses to bids. Three one-way ANOVAs were run to determine whether consultees and consultants differed significantly from each other in the percentage of their requests that were accepted, rejected, or evaded. In these analyses, role (e.g., consultant) served as the independent variable and response to request (e.g., percentage accepted) served as the dependent variable. Three additional one-way ANOVAs were run to determine whether consultees and consultants differed significantly from each

other in percentage of dominant, dominant-affiliative, and submissive bids. In these analyses, role (e.g., consultee) served as the independent variable and request type (e.g., percent dominant bids) served as the dependent variable. One additional one-way ANOVA was run to determine whether consultees and consultants differ significantly from each other in the total number of bids they advanced during the Problem Identification Interview (PII).

There were no significant differences between the percentage of consultee and consultant bids that were accepted [$F(1,51)=3.35$, $p=.07$] or evaded [$F(1,51)=.58$, $p=.45$]. There was, however, a significant difference between the percentage of consultee and consultant bids that were rejected [$F(1,51)=5.67$, $p=.02$]. Significantly more consultee bids than consultant bids were rejected.

Significant differences were noted in comparisons of the consultant and consultee percentage of dominant [$F(1,51)=12.60$, $p=.001$], dominant-affiliative [$F(1,51)=112.59$, $p<.001$], and submissive bids [$F(1,51)=81.70$, $p<.001$]. Consultants made a significantly higher percentage of dominant and dominant-affiliative bids than consultees. Further, consultees made a significantly higher percentage of submissive bids than consultants.

Further, a significant difference was noted in the total number of bids advanced [$F(1, 64)=205.16$, $p<.001$]. Consultants advanced significantly more bids than consultees during the PII. These results provide support for the notion that consultants control or direct the consultation interaction through making requests, particularly dominant and dominant-affiliative bids.

Paired sample t-tests were also was used to compare consultee and consultant overall percentage of accept, reject, and evasive responses to requests/bids as well as consultee and consultant overall percentage of dominant, dominant-affiliative, and submissive bids/requests. The paired sample t-tests resulted in the same pattern of results as the ANOVAs (See appendix H for the results).

Summary of the Results

Consultant measures of control (i.e., dominant, dominant-affiliative, submissive bids) were not found to be significantly related to treatment integrity, client behavior change, or consultee satisfaction. Consultant percent dominant-affiliative bids was significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by consultants during the PII the less likely the client's behavior was perceived to have changed after intervention. This result is in the opposite direction to the proposed direction of this relationship, based on prior literature. As noted previously, this effect may be related to disappointment with the absence of actual assistance. Consultant percent submissive bids also was significantly related to perceptions of client behavior change. Thus, the more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed. Therefore, the use of submissive bids by consultants may have led to more active consultee participation in the consultation process and to the implementation of more effective interventions. Consultant total bids was significantly related to consultees' satisfaction with consultation. This finding is suggestive of consultees being dissatisfied with longer consultation interviews and of the need for consultants to efficiently meet the needs of teachers.

Consultee dominant and submissive bids were not significantly related to the four outcome measures. Consultee percent dominant-affiliative bids, however, was significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by the consultee the more likely the clients' behavior was perceived to have changed. This finding was in the opposite direction to the proposed correlation and may mean that the use of dominant-affiliative bids by consultees resulted in the consultees feeling empowered, which resulted in the implementation of more effective interventions.

Consultee total bids was significantly related to consultee satisfaction and treatment integrity. Thus, the more bids advanced by the consultees the less satisfied they were with

the consultation experience and the less likely the consultant was to report that the intervention was implemented with integrity. This correlation is in the expected direction.

The number of years of consultee teaching experience was not significantly related to the consultee satisfaction, perceptions of client behavior change, or treatment integrity and significantly related to client behavior change ($r=-.42$, $p=.05$). The more teaching experience the consultee had the more likely the client's behavior improved as a result of behavioral consultation. Consultee training in behavior modification was not significantly to client behavior change, consultee satisfaction, or treatment integrity; it was, however, significantly, related to perceptions of client behavior change ($r=.49$, $p=.001$). Thus, the more training consultees had in behavior modification the more likely the clients' behavior was perceived to have changed. Behavior modification skills appear to enable consultees to work more effectively with clients and assist in behavior change. The effectiveness of consultees' previous consultation experience was not significantly related to the outcome measures.

The number of years of consultant experience as a school psychologist was not significantly related to the four outcome measures. The individual consultant bid types and total bids were not significantly related to interviewing competency.

DISCUSSION

The purpose of this study was to examine aspects of interpersonal control within the behavioral consultation exchange and to examine the relationship between interpersonal control and consultation outcomes. Control was operationalized from a relational communication perspective as involving the use of three types of bids/requests (i.e., dominant, dominant-affiliative, submissive). Outcome measures were a consumer satisfaction questionnaire, perceptions of client behavior change, a measure of client behavior change, and a measure of treatment integrity.

In this chapter, the results of this study and their implications will be discussed. In

addition, potential reasons for nonsignificant findings, limitations of the present study which affect interpretation of results, and directions for future research will be considered.

Findings and Hypotheses

The four research questions and hypotheses of this study predicted that a relationship would exist between measures of consultant and consultee control (i.e., dominant, dominant-affiliative, and submissive bids) and the four outcome measures. These hypotheses were not supported by the results. Nonsignificant correlations were found between consultant measures of control (i.e., dominant, dominant-affiliative, submissive bids) and perceived treatment integrity, client behavior change, and consultee satisfaction. Consultant percent dominant-affiliative bids, however, was significantly related to perceptions of client behavior change. The more dominant-affiliative bids used during the PII the less likely the clients' behavior was perceived to have changed. This result is in the opposite direction to the proposed direction of this relationship, based on prior literature. This finding could mean that the consultees were disappointed when the consultant did not provide the assistance that was implied by the dominant-affiliative bids (e.g., "We need to use timeout to address this problem"). Consultant percent submissive bids also was significantly related to perceptions of client behavior change. Thus, the more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed. This finding suggests that the use of submissive bids, which tend to give power to the consultee, may lead to positive outcomes for clients. Consultant total bids was significantly related to consultee satisfaction. The more bids consultants advanced, regardless of type, the less satisfied the consultees were.

These results seem to suggest that the use of submissive bids by the consultants during the PII is related to positive perceptions of client behavior change. Further, since the number of bids advanced by consultants provides an indication of interview length, this finding suggests that consultees are dissatisfied with long interviews and that consultants

should monitor the length of interviews and efficiently meet the teachers' needs and interview objectives.

Nonsignificant correlations were found between consultee dominant and submissive bids and the four outcome measures. Consultee percent dominant-affiliative bids was significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by the consultee the more likely the clients' behavior was perceived to have changed. This finding was in the opposite direction to the proposed correlation and may mean that consultee use of dominant-affiliative bids resulted in the empowerment of the consultees.

Consultee total bids was significantly related to consultee satisfaction and treatment integrity. Thus, the more bids advanced by the consultee the less satisfied they were with the consultation experience and the less likely the intervention was implemented with integrity.

When the correlations between the measures of consultant and consultee control and the outcome measures were calculated separately for males and females, results similar to those reported above were found for the females with the addition of a significant relationship between submissive bids and client behavior change. The more submissive bids advanced by females the more likely the clients' behavior changed as a result of consultation. Based on these findings, it appears that the use of submissive bids may be more effective for female consultants. None of the correlations were significant for the male consultants. These findings are interesting and may bear future study; however, this may be difficult because most practicing school psychologists are female.

Results and Prior Literature

Consistent with previous research (e.g., Erchul, 1987; Erchul & Chewning, 1990; Erchul et al. 1995; Witt et al., 1991) consultants, in the present study, advanced significantly more bids than the consultees and, thus, appeared to control the nature and

course of the consultation interaction. Further, consultees cooperated with the consultants by accepting most of the consultants' requests and making few requests of the consultants. Consultants made a significantly higher percentage of dominant and dominant-affiliative bids than consultees. Further, consultees made a significantly higher percentage of submissive bids than consultants. Consultants used mainly dominant-affiliative bids and consultees used mainly submissive bids. Consultants advanced few dominant and submissive bids during the PII. The fact that consultees advanced less total bids than consultants and advanced a greater percentage of submissive bids, provides evidence of consultees being passive participants in consultation and relinquishing some of their control. Most of the consultants' and consultees' bids were accepted by the other participant.

The types of bids advanced by consultants during consultation in the present study are generally consistent with those reported by Erchul et al. (1995) and different from those reported by Erchul and Chewning (1990). The consultants in Erchul and Chewning (1990) used dominant-affiliative bids less frequently and submissive bids more frequently than the consultants in the present study.

The percentage of consultant bids that were accepted, rejected, and evaded are fairly consistent across the three studies. Consultants' bids in the Erchul et al. (1995) and Erchul and Chewning (1990) studies were accepted slightly more frequently and evaded slightly less frequently than the consultants' bids in the present study.

Consultees in the present study were similar to the consultees in Erchul and Chewning (1990) regarding the bids they advanced. The present consultees, however, advanced submissive bids more frequently and dominant-affiliative less frequently than the consultees in Erchul et al. (1995). Thus, it appears that the consultees in the present study were less controlling than those investigated by Erchul et al. (1995). The percentage of consultee bids accepted and evaded were fairly consistent across the three studies.

Consultee bids in the present study were twice as likely to be rejected than consultee bids in the other two studies.

Erchul and Chewning (1990) found that consultant dominant, dominant-affiliative, and submissive bids as well as consultant total bids were not significantly related to consultee satisfaction with consultation and other consultation outcomes. Further, Erchul et al. (1995) failed to find a significant relationship between the consultant bids (e.g., submissive) and consultant effectiveness. However, for a subsample of behavioral consultants, Erchul et al. (1995) found that dominant bids were significantly negatively correlated with the consultant effectiveness and dominant-affiliative bids were significantly positively correlated with consultant effectiveness. Thus, consultants that told the consultees what to do were viewed as less effective and consultants that advanced dominant-affiliative bids were perceived to be more effective.

Erchul (1987) found that consultees with higher scores on the domineeringness variable were viewed by consultants to be less willing to collect baseline data. Erchul and Chewning (1990) found that consultee requests advanced during the PII had an adverse effect on the outcomes of behavioral consultation, such as consultee satisfaction, consultee participation in baseline data collection, and consultee participation in treatment plan implementation.

Previous researchers have concluded that effective consultants tend to provide structure to the consultation interaction and exercise control over the consultation process by asking questions, making dominant and dominant-affiliative requests, and seeking and offering specifics about the problem (Bergan & Tombari, 1976; Erchul ,1987; Erchul & Chewning, 1990; Erchul et al., 1995). In addition, within school-based consultation, positive outcomes have been found to result when the consultee follows the direction established by the consultant in the interview rather than attempting to change the direction or initiate requests of the consultant (Witt et al., 1991). These findings have lead us to

refine our concept of collaboration in consultation relationships.

Other researchers (e.g., Erchul, 1987) using the same or similar coding procedures have not investigated consultant gender effects. In addition, since most school psychologists are female, few studies involving school psychologists have investigated gender effects. Recently, however, researchers have begun to focus on gender in school psychology (e.g., Henning-Stout & Conoley, 1992) and in consultation (Conoley & Welch, 1988). Conoley and Welch (1988) analyzed the consultation logs of twenty school psychology graduate students and found the following gender differences: a) female consultants tended to work with consultees in a nonconfrontive, nondirective manner b) male consultants tended to work in a more directive, active manner with consultees, and c) male consultants tended to behave as "experts". These findings were confirmed by independent evaluations completed by field advisors. The findings reported by Conoley and Welch (1988) in combination with the present findings suggest that males and females may differ in their interactions with consultees and these differences in interactions may influence the results of consultation. These differences, if they are corroborated by future research, may have implications for the graduate education of consultants.

Nature of the Consultation Relationship

In behavioral consultation, consultants and consultees do different things and take on different roles during consultation interviews. Consultants establish the stages of consultation and, thus, lead or guide consultees through the problem-solving process by making requests of consultees through the use of mainly dominant-affiliative bids (e.g., "What happens before Jill begins to engage in the self-stimulatory behavior?"). The consultant sets the context and structures the consultation interaction. Consultants also share psychological and educational knowledge related to the problem (Bergan & Kratochwill, 1990). Consultees, on the other hand, describe the referral client's problem, share content knowledge related to the problem, collect data, answer consultants'

questions, and implement interventions (Bergan & Kratochwill, 1990). Consultation seems to work best when consultants and consultees follow their respective roles and responsibilities in consultation.

Currently, a debate exists regarding the nature of the consultation relationship. According to Brown (1993), the nature of the communication process in consultation and, particularly, who should control it are at issue in this debate. There are two sides to this debate. On one side of this issue are professionals who believe that consultation should be a collaborative, nonhierarchical endeavor in which the consultant and consultee have mutual control over the consultation relationship (i.e., coordinate power status). On the other side, professionals believe that consultation involves an interpersonal influence process in which the consultant uses persuasion to direct or guide the consultee through the consultation process and the consultant has control over the consultation relationship (i.e., not coordinate power status). At issue here, in part, is the need to further define collaboration and noncollaboration (Erchul, 1992; Noell & Witt, 1996; Witt, 1990b). It appears that the debate regarding the nature of the consultation relationship is influenced by the absence of an agreed upon definition of collaboration as well as the misinterpretation of the term collaboration.

In a relationship based in coordinate power status, the consultant shares his/her expertise regarding the problem, while soliciting the expertise of the consultee in order to solve the presenting problem. The input of each of the participants carries equal power. Further, coordinate power implies that two or more people are of equal rank, position, and class (Henning-Stout, 1993). Sheridan (1992) further clarifies the meaning of the co-equal status of the consultant and consultee in the consultation interaction when she states that co-equal status within consultation should be interpreted as equality in decision-making status, not equality in content or process expertise.

Noell and Witt (1996) have concluded that the co-equal status of the consultant and

discussed, and some aspects will be controlled by the consultee, such as data collection and plan implementation. Consultants in the present study often used dominant-affiliative (e.g., "Please describe Tony's behavior problems in the classroom", "What percentage of the time does Joe fail to complete his homework?" and dominant (e.g., "Tell me about Scott's reading problem", "You will collect baseline data for ten days starting on Monday") bids to control the topics that were discussed, such as the identification of the problem, situational factors related to the problem (e.g., antecedents), goal setting, and data collection. Further, consultants in the present study used submissive bids (e.g., " How could we keep track of this on-task behavior?", "What would be a goal you'd like to work toward?"), giving the consultee more control, when attempting to set a goal for client improvement and to determine a data collection method that is acceptable to the consultee. So it may be more accurate to say that consultation is partially collaborative in nature, partially under the control of the consultant, and partially under the control of the consultee. Thus, it may not be that consultation is either collaborative or directive but rather some combination of the two (Witt, 1990a). Erchul (1992) alluded to this possibility when he stated, "the current debate over whether the school-based consultant should be directive versus collaborative is unfortunate because the distinction likely constitutes a false dichotomy when viewed through a dyadic/interpersonal perspective as presented here" (p. 365). The dominant consultant as defined by Erchul (1987) is dominant only because the consultee accepts or at least does not object to the conversational direction the consultant has established.

Because of the difficulties encountered in defining and interpreting the term collaboration and noncollaboration in consultation (e.g. directive), it may be more appropriate to use the term cooperative, which involves willingly working with others for a common purpose or benefit (Random House Webster's College Dictionary , 1995). The use of the term cooperation may lead to less confusion and misinterpretation than the use of the term collaboration. In a cooperative relationship the consultee generally accepts the requests

of the consultant and makes few requests of the consultant. In consultation, the consultant and consultee generally understand their own role as well as the other's role. In this view of a cooperative consultation relationship, the consultee is viewed as following the lead of the consultant, not vice versa.

In conclusion, it appears that the debate regarding the most effective consultation relationship centers, in part, around the misinterpretation of terms. The terms collaboration and cooperative may, in fact, both be appropriate terms to use in the description of the consultation relationship, such that certain circumstances in consultation involve joint control and decision-making and others involve the consultant or consultee exercising control over the interaction. This debate has provided an impetus for beginning to explore the nature of the consultee-consultant relationship which had previously been largely ignored in the consultation literature (Kratochwill & Van Someren, 1985). According to Gutkin and Curtis (1982), the consultant's success in consultation is largely dependent on his/her communication and relationship skills. Further, according to O'Keefe and Medway (1997), the nature of the consultation relationship and its effect on the consultee determine whether or not the intervention developed during consultation will be implemented. Relationship variables have been found to be related to client outcomes in behavior therapy and counseling (Goldfried & Davison, 1976, 1994; Wilson & Evans, 1977); thus, it makes sense to gain an understanding of relationship issues in consultation. Effective therapy and presumably effective consultation involve more than technical skills. Ultimately, the nature of the consultation relationship, however, is important to the extent that it leads to positive consultation outcomes, in terms of client behavior change, consultee behavior change, consultee satisfaction, and consultee knowledge and skills. Limited support (e.g., Erchul, 1987; Witt et al., 1991) has been found for control to be related to positive consultation outcomes.

Potential Reasons for Nonsignificant Findings

In this study, consultation resulted in positive outcomes for clients as measured by consultant and consultee perceptions and client outcome data. These results were not, however, adequately explained by the variables studied in this research. Several explanations may be advanced for these nonsignificant findings. First, the consultation outcomes investigated in this study may be related more to behaviors occurring during the later stages of consultation (i.e., Problem Analysis Interview, Plan Implementation, Plan Evaluation Interview) than the PII. These stages were not studied in this research. Since the outcome measures used in this study were measured proximal to the PEI and distal from the PII, it is possible that behaviors and events occurring later in the consultation sequence may be more relevant to the outcomes than those occurring during the early stages of consultation. Previous researchers have generally studied all three consultation interviews (i.e., PII, PAI, PEI) or only the relationship of the PII to more proximal outcomes (such as willingness to collect baseline data). Perhaps, it was unrealistic to expect behaviors occurring during the PII to relate to outcomes that occurred weeks later during the PEI.

Measurement error or the reliability of the dependent variables used in this study may be a factor in the absence of relationships between the independent variables and the outcomes of this study. An assumption of correlational analysis is that the variables being correlated have been measured reliably. If this assumption is violated, the slope of the regression line and the correlation coefficient become more biased toward zero as the error in measurement increases (McNemar, 1962, 1969). The consumer satisfaction questionnaire (CSQ) appears to be reliable with a coefficient alpha of .92; however, the reliability of the other outcome measures used in this study (i.e., treatment integrity, perceptions of client behavior change, client behavior change) has not been determined. General test theory suggests that these outcome measures may have weak reliability because they are based on a single item (Anastasi, 1988; Neale & Liebert, 1973; Nunnally

& Bernstein, 1994). According to Anastasi (1988), a larger sample of behavior allows the researcher to arrive at a more adequate and consistent measure of the construct of interest. The reliability of the perceptions of client behavior change measure is particularly questionable because it does not represent the consultant's perception or the consultee's perception, but rather the consultant's perception of the consultee's opinion.

Reduced variability due to all of the consultants attending a behavioral consultation workshop before initiating consultation may be a factor in the absence of relationships between the independent variables and the outcomes of this study. Further, the fact that the consultees were not randomly selected by the consultants to participate in behavioral consultation (BC) may have resulted in a biased sample, which may have further reduced variability. According to Cohen (1994), correlation coefficients change with the degree of variability of the variables. Since correlation provides a measure of the extent to which two measures covary, the strength of the correlation is influenced by the size of the standard deviations of the variables of interest and high correlations can be obtained only when there is a large amount of variation (i.e., variance) in the measures being correlated (Nunnally, 1975).

Further, consultants may have chosen consultees with whom they had a more positive or friendly relationship for participation in consultation. This sample may have reported positive outcomes as a result of consultation due to the positive relationship with the consultant rather than due to what happened during the consultation interaction.

Another factor that may account for the absence of significant relationships between the independent variables and the outcomes of this study is that no relationship, in fact, exists between the independent and dependent variables. It may be that the theory suggesting that consultant control, as defined by the individual bid types (e.g., submissive), of the consultation interactions should be related to consultation outcomes is wrong. Another possibility is that the method of operationalizing control (e.g., dominant

bids) used in this study may be inappropriate or inadequate.

These factors represent some of the possible explanations for the failure of this study to account for the client behavior change outcomes. Any one of these factors or any combination thereof may account for the absence of significant relationships between the independent variables and the outcomes of this study. Further, another, unidentified factor, may account for the absence of a relationship between the variables studied.

Limitations

Since only the Problem Identification Interview (PII) of behavioral consultation was investigated in this study, readers should not attempt to generalize these results to the Problem Analysis (PAI) or Problem Evaluation (PEI) interviews or to other models of consultation. Further, the small sample size and the selectivity bias created by the consultants selecting consultees with whom they were familiar, and perhaps friendly, for participation in consultation, may have reduced the generalization of these results to other consultants, consultees, and clients.

Further, the diverse client population in terms of age and target behavior may have affected the processes and outcomes of the present study. Clients varied in age from two to sixteen years of age and exhibited a variety of behavioral (e.g., self stimulatory behavior, verbal outbursts, aggressive behavior, noncompliance) and academic (e.g., math facts, reading) problems. The present study did not allow for the adequate examination of this issue, due to the small sample size.

A second limitation of this dissertation research stems from its reliance on self-report, perceptual measures of outcome (i.e., consultee satisfaction, perceived treatment integrity, perceptions of client behavior change). Self-report measures are known to be associated with biases and may be more responsive to expectancy effects and demand characteristics that can affect the results of research investigations (Badia & Runyon, 1982). The use of self-report measures may call into question the internal validity of this

study. For example, it is possible that consultee satisfaction as reported on the Consumer Satisfaction Questionnaire (CSQ) and consultant perceptions of treatment integrity may have been positively or negatively affected by the past history between the consultant and consultee.

A third limitation of this study relates to the large number of correlations that were calculated. The large number of correlations that were calculated may have increased the error rate, especially the Type I error rate, and resulted in finding significant results by chance.

Another limitation of this study is that the Folger and Puck (1976) coding system has not been validated specifically for use in behavioral consultation research, although it has been used previously in consultation research. Studies regarding the reliability and validity of the Folger and Puck relational coding system are scarce; however, the available studies have found the Folger and Puck to be reliable and have adequate content and construct validity as well as high predictive validity (Ayres & Miura, 1981; Sillars & Folger, 1978). The Folger and Puck relational coding system may be too simplistic, as suggested by Brown (1993), and fail to adequately describe the relational aspects of the consultation relationship.

Another factor that must be considered in evaluating these results is sample size as it relates to the power of statistical tests employed. Statistical power is defined as the probability of correctly rejecting a false null hypothesis, which decreases the probability of a type II error , retention of a false null hypothesis. Power equals $1-\beta$ (Cohen, 1969; Howell, 1992). Thus, statistical power is the probability that a statistical test will produce statistically significant results. Statistical significance is highly dependent on sample size. As sample size increases, less difference between means is required for statistical significance and the higher the statistical power (Cohen, 1969). Cohen (1969) recommends that investigators use a power value of .80.

In the present study, with n= 29 and α= .05 (one-tailed), for r= .10, power = .13, for r= .20, power = .28, for r= .30, power = .49, and for r= .40, power = .71 (Cohen, 1969). Hence, with a correlation of .10 under these conditions there is a 13 out of 100 chance of correctly rejecting the null hypothesis. These power values all fall below the recommended .80.

Directions for Future Research

Several suggestions for future research can be proposed from an examination of the results of this dissertation research. The primary suggestion is for future research that attempts to identify predictors of consultation effectiveness and outcome, to focus on additional process variables (e.g., interruptions, talkovers, nonverbal behaviors, and length of statements) in addition to the process variables studied here, and other input variables (e.g., teacher attributions of the client's problem, teachers' views of consultation, and consultant's previous success rate in consultation, teacher expectations), that may account for outcomes.

Further, there is a need to develop and further refine verbal interaction coding schemes, especially those that focus on the reciprocal influences between consultants and consultees or that involve the coding of the conditional function of words and phrases (Erchul, 1987). One suggestion for the future use of the Folger and Puck coding system is to divide the dominant-affiliative category into subcategories to provide a clearer specification of statements because the dominant-affiliative category encompasses a rather broad array of communication behaviors. For example, the dominant-affiliative category is used to code the requests that involve fact finding (e.g., "What happens after Jill throws a temper tantrum?" and "What types of instructional strategies do you use to teach phonics?"), requests that suggest action to be taken (e.g., "We need to determine a way to collect baseline data" and "Let's set a goal for her performance"), and requests that involve

the clarification of information (e.g., "Jane is reading at the second grade level, right?"). In future research, there also is a need to investigate consultant and consultee process variables that occur during the Problem Analysis Interview (PAI) and the Plan Evaluation Interview (PEI). Erchul (1987) observed that the PAI appeared to include a variety of attempts at persuasion, making it worthy of greater investigation.

In future research, there is a need to collect objective, direct measures of student and teacher outcomes as a result of consultation and rely less on self- report measures. Direct observational data regarding treatment integrity also are needed in order to determine whether the process of consultation actually influences adherence to intervention plans. Further, there is a need to ensure that the measures used in future research investigations reliably measure the constructs they are intended to measure so that greater confidence can be placed in the experimental results.

In the future researchers need to know about the past history of the consultant and consultee. It has been suggested that past history may influence the outcomes of consultation; however, the manner in which past history influences consultation outcomes is largely unknown. There is also a need to know about teachers expectations regarding consultation and how these expectations may interact with consultant use of dominant, dominant-affiliative, or submissive bids. There is also a need to know how teacher expectations are related to consultation outcomes. Also, there is a need to know more about how teacher characteristics (e.g., years of teaching experience, expectations, training in behavior modification) influence the teachers' responses to the various types of bids (i.e., dominant, dominant-affiliative, submissive) that consultants make during consultation.

Further, future researchers need to investigate what happens between and after meetings. For example, does consultant involvement or lack of involvement in data collection activities, intervention implementation, and the training of consultees relate to client outcomes and consultee satisfaction with consultation.

Furthermore, there is a need to ensure that the sample of consultees chosen for future research studies is not biased due to consultant selection. In fact, in future research, consultees should be randomly selected for participation in consultation research.

Conclusion

In conclusion, I will summarize some of the major findings of this study. First, the consultants in this study guided the consultees through the process of behavioral consultation by making requests of the consultees. The consultees cooperated with the consultants by providing the requested information and making few attempts to control the consultation topics or process. These findings are consistent with previous research (Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995; Witt et al., 1991) which has found that consultants lead and consultees follow during consultation. The results of this study have failed, however, to establish a link between this pattern of interaction and significant consultation outcomes (e.g., client behavior change).

Second, correlations involving the consultant and consultee bids and consultation outcomes failed to support the hypotheses. The significant findings were in the opposite direction to the direction proposed. Consultant percent dominant-affiliative bids was significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by consultants during the PII the less likely the client's behavior was perceived to have changed after intervention. This finding suggests that consultants should be prepared to back their dominant-affiliative bids up with action and assist consultees with data collection and intervention activities whenever feasible. Consultant percent submissive bids also was significantly related to perceptions of client behavior change. The more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed. This finding seems to suggest that consultants would be wise to use submissive bids in order to encourage consultee participation in the consultation process.

Consultant total bids and consultee total bids, which are related to interview length, were significantly related to consultees' satisfaction with consultation. The more bids consultants and consultees advanced the less satisfied the consultees were. Consultee total bids also was significantly related to treatment integrity. These findings suggest that consultees are dissatisfied with longer consultation interviews and that consultants should strive to meet the teachers' needs and the objectives of consultation in an efficient manner. Further, consultees may be less likely to implement interventions with integrity the longer the consultation interview lasts.

Third, consultee years of teaching experience and training in behavior modification were related to two of the consultation outcomes. The number of years of consultee teaching experience was significantly related to client behavior change ($r=-.42$, $p=.05$). The more teaching experience the consultee had the more likely the client's behavior improved as a result of behavioral consultation. Consultee training in behavior modification was significantly related to perceptions of client behavior change ($r=.49$, $p=.001$). Thus, the more training consultees had in behavior modification the more likely the clients' behavior was perceived to have changed. Behavior modification skills appear to enable consultees to work more effectively with clients and assist in behavior change.

Fourth, in this study, consultation resulted in positive outcomes for clients based on consultant and consultee perceptions and client outcome data. These results were not, however, adequately explained by the variables (e.g., consultant and consultee control, interview competency) studied in this research. Several explanations have been advanced for these nonsignificant findings (e.g., reduced variability, measurement error).

Finally, although the hypotheses of this study were not supported, this dissertation research has resulted in the identification of several areas that are in need of additional research investigation to provide further information about the relationship between measures of interpersonal control and outcomes of school-based consultation. The present

study provides additional support for the conclusion that has been reached by previous researchers (Bergan & Tombari, 1976; Erchul & Chewning, 1990; Erchul et al., 1995) that behavioral consultation is a complex process that is influenced by many variables that can be studied using verbal coding schemes. The key characteristics of the most effective consultation relationship continue to be difficult to identify. This appears to be due to the multiple variables that can influence the consultation interaction, such as consultant variables, consultee variables, client variables, and school system variables.

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GENERAL CONCLUSION

Behavioral consultation is a complex process influenced by many diverse, but interrelated variables that can be studied using verbal coding systems (Bergan, 1977; Erchul & Chewning, 1990). Bergan and Tombari developed an extensive coding system of verbal behavior during consultation interviews that has been used to categorize interchanges between consultants and consultees. Their research indicates that the message categories of this coding system (e.g., source, content, process) are important in consultation. Specifically, effective use of consultation has been found to require a relatively high frequency of behavior, behavior setting, observation, and plan message content. In behavioral consultation, critical verbal skills involve the consultant's ability to either emit or elicit statements that involve the specification, summarization, validation, or evaluation of certain information (Tombari & Davis, 1979).

Relational communication coding systems (e.g., Folger & Puck, 1976) also have provided a methodology for operationally defining interpersonal control and for studying the relationship between this consultation process and consultation outcomes. Erchul and his colleagues have used relational communication coding systems to investigate the relationship between interpersonal control and consultation outcomes. Erchul (1987), Erchul & Chewning (1990), Erchul et al., 1995, and Witt et al. (1991) have concluded that effective consultants tend to exercise control over the consultation process by asking questions, offering directives, and initiating topic changes. Further, within school-based consultation, more favorable results are obtained when the consultee cooperates with the consultant by complying with the consultant's requests and advancing few requests of their own.

Currently, a debate exists among researchers and practitioners regarding the type of consultant-consultee relationship that is desirable. While many researchers and practitioners argue that the consultation relationship should be collaborative and nonhierarchical (e.g.,

Babcock & Pryzwansky, 1983; Parsons & Meyers, 1984; Wenger, 1979), others have argued that the consultation relationship should be viewed as cooperative in that the consultant guides the consultee through the process of consultation in order to achieve successful outcomes (e.g., Conoley & Gutkin, 1986; Erchul, 1987; Erchul & Chewning, 1990; Witt et al., 1991). While researchers (e.g., Bergan & Tombari, 1975, 1976; Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995) have begun to unveil the nature of the consultation relationship, there is a need for additional research that addresses this debate.

In the present study, the consultants guided the consultees through the process of behavioral consultation by making requests of the consultees. The consultees cooperated with the consultants by providing the requested information and making few attempts to control the consultation topics or process. These findings are consistent with previous research (Erchul, 1987; Erchul & Chewning, 1990; Erchul et al., 1995; Witt et al., 1991) which has found that consultants lead and consultees follow during consultation. The results of this study have failed, however, to establish a link between this pattern of interaction and significant consultation outcomes.

Correlations involving the consultant and consultee individual bid types and consultation outcomes failed to support the hypotheses. Consultant dominant-affiliative bids and submissive bids were significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by consultants during the PII the more likely the client's behavior was perceived to have remained unchanged after intervention. In contrast, the more submissive bids advanced by the consultant the more likely the clients' behavior was perceived to have changed. Consultee dominant-affiliative bids were significantly related to perceptions of client behavior change. The more dominant-affiliative bids advanced by the consultee the more likely the clients' behavior was perceived to have changed.

Consultant total bids and consultee total bids, which are related to interview length, were significantly related to consultees' satisfaction with consultation. The more bids consultants and consultees advanced the less satisfied the consultees were. Consultee total bids also were significantly related to treatment integrity. Further, consultees may be less likely to implement interventions with integrity the longer the consultation interview lasts. These findings suggest that consultees are dissatisfied with longer consultation interviews and that consultants should strive to meet the teachers' needs and the objectives of consultation in an efficient manner.

In this study, consultation resulted in positive outcomes for clients based on consultant and consultee perceptions and client outcome data. These results were not, however, explained by the variables (e.g., consultant and consultee control, interview competency) studied in this research.

Finally, although the hypotheses of this study were not supported, this dissertation research has resulted in the identification of several areas that are in need of additional research investigation to provide further information about the relationship between measures of interpersonal control and outcomes of school-based consultation. The key characteristics of the most effective consultation relationship and relationship type continue to be difficult to identify; thus, the debate regarding the nature of the consultation relationship continues.

APPENDIX A

BEHAVIOR CONSULTATION CASE SUMMARY REPORT FORM

Project RE-AIM

Behavior Consultation Case Summary Report Form

Consultant's name _____ AEA _____

Consultee's name _____ School _____

Student's name _____

Age _____ Grade _____ Sex _____

Referred by _____

Reason for referral _____

_____

Has the student received special education services? Yes ___ No ___ or has a special education eligibility evaluation been conducted with this student? Yes ____ No ____
If Yes, please describe dates, nature, results, and any services. _____
_____
_____

PROBLEM IDENTIFICATION INTERVIEW (PII)

Date PII held _____

List problem behaviors _____
_____

List target behavior _____
_____

Operational definition of target behavior _____
_____
_____

What was estimated strength of target behavior _____
_____

What is the tentative goal _____
_____

Conditions: Antecedent _____
_____

Conditions: Situational _____
_____

Conditions: Consequent _____
_____

Data collection procedure _____
_____

Who will record? _____

What will be recorded? _____

How often/when? _____

Did you provide the consultee with a written copy of:

a) Target Behavior Definition? Yes ____ No _____

b) Data Collection Procedure? Yes ____ No _____

c) Data Collection Form? Yes ____ No _____

PROBLEM ANALYSIS INTERVIEW (PAI)

Date PAI held _____

What was the baseline for the target behavior _____
_____

Conditions: Antecedent _____
_____

Conditions: Situational _____
_____

Conditions: Consequent _____
_____

Is the target behavior primarily: Skills___ Performance___ Both ___

What is the goal _____
_____

Describe the plan _____
_____
_____
_____

Who will implement the plan? _____

Describe the type of reinforcement used (if any) _____
_____

Describe the type of aversive stimuli used (if any) _____
_____

PLAN IMPLEMENTATION

How long was the plan in effect before the Problem Evaluation Interview?_____
_____

Did the consultant provide training for the consultee on plan implementation?
Yes ____ No____

If Yes, please describe _____
_____

Did the consultant talk with the consultee during plan implementation?
Yes ____ NO ____

If Yes, describe nature, content, and duration of discussion _____
_____

Was the plan revised? Yes _____ No _____

If Yes, please describe reasons for and nature of the revisions _____
_____
_____

How confident are you that the plan was implemented correctly?

1	2	3	4	5	6	7	8	9
Certain it was implemented correctly				Uncertain have no impressions or data				Certain it was <u>not</u> implemented correctly

PLAN EVALUATION INTERVIEW (PEI)

Date PEI held _____

Describe data and change (if any) from baseline _____
_____

Were goals of consultation attained? Please describe results _____
_____
_____

In the consultee's opinion, was the plan responsible for any change?

Yes _____ No _____ Not sure _____

In the consultee's opinion, could this plan be used with another student with a similar problem? Yes ___ No ___ Not sure ___

Will the plan be continued? Yes ___ No ___

If Yes, please describe the arrangements _____
_____

Is there a plan for maintenance and/or generalization? Yes___ No__

If Yes, please describe _____
_____

Did the consultee wish to work on other problem behaviors?
Yes ___ No ___

If Yes, please describe subsequent steps _____
_____

In your opinion, do you think this student will be <u>in</u> special education one year from now?

1	2	3	4	5	6	7
Yes Very Likely	Likely	perhaps Yes	Uncertain	Perhaps No	Unlikely	No Very Unlikely

If you answered 1, 2, or 3 on likelihood of special education placement, please indicate the probable classification (e.g., learning disabled, mental disability, etc.) and program option (e.g., resource, self-contained with integration, etc.).

Classification _____ Program Option _____

NOTE: PLEASE ATTACH A COPY OF THE DATA COLLECTION FORM(S) USED WITH THIS CASE.

APPENDIX B

CONSUMER SATISFACTION QUESTIONNAIRE

SATISFACTION WITH CONSULTATION

Identification Number _____

Years of Teaching Experience _____

Please indicate your level of agreement with the following statements according to the scale provided:

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

1. The purpose of consultation is to determine if the referred student requires and qualifies for special or compensatory education.	1	2	3	4	5
2. I feel better equipped to handle similar problems with students in the future as a result of my experience with consultation.	1	2	3	4	5
3. Before I met with the consultant, I expected to be given specific strategies to solve the referred student's problem.	1	2	3	4	5
4. My current understanding of the consultation process is that it is a problem-solving approach designed to deal with the problem within the regular classroom.	1	2	3	4	5
5. I want to use consultation services in the future.	1	2	3	4	5
6. As a result of consultation, the referral problem was resolved in my classroom.	1	2	3	4	5
7. Overall, I was satisfied with my consultation experience.	1	2	3	4	5
8. Additional problems with the referred student have appeared since my consultation experience.	1	2	3	4	5
9. There is a possibility that I will refer this student for a comprehensive evaluation within the next three months, or that s/he will be referred early next year	1	2	3	4	5
10. If this student is referred again, special education services are the likely outcome.	1	2	3	4	5
11. I prefer to seek out consultation services to solve a student's problems in the classroom before I refer the student for special testing.	1	2	3	4	5
12. when properly conducted, consultation can prevent students with behavioral and academic problems from being placed in a special classroom.	1	2	3	4	5
13. The principal in my school encourages the use of consultative services as a method of solving classroom problems.	1	2	3	4	5
14. The principal of my school encourages individual testing of students as a method of solving classroom problems.	1	2	3	4	5
15. When I refer a child, I would like for them to be evaluated for special education services.	1	2	3	4	5

1	2	3	4	5
strongly agree	agree	neutral	disagree	strongly disagree

16. Children experiencing academic or behavioral problems usually need special education services and the consultation process only delays this outcome. 1 2 3 4 5

17. I was satisfied with the consultant's: 1 2 3 4 5

a. ability to understand and empathize with my specific concern 1 2 3 4 5

b. ability to stay on topic (i.e., the target behavior) during the interview 1 2 3 4 5

c. explanation of the consultation process 1 2 3 4 5

d. explanation of my role and responsibilities as a consultee 1 2 3 4 5

e. overall effectiveness in solving the problem I had referred 1 2 3 4 5

18. I have received _____ training in behavior modification/applied behavior analysis. (Circle the highest level of training)

a. 1/2 day workshop
b. one full day workshop
c. undergraduate level course
d. graduate level course
e. no training

19. I believe consultation is used most effectively

a. prior to consideration for special education
b. after the referral for special education consideration has been initiated
c. after the assessment is completed and the student failed to qualify for services

20. I have had previous consultation experiences which I felt were _____ in solving my referral concern.

a. effective
b. ineffective
c. this was the first time I have been involved with consultation

21. If consultation was ineffective, please circle the reason that best describes your situation:

a. the intervention was not appropriate
b. the intervention was not carried out properly
c. the consultant did not return for follow-up meetings
d. other (please specify) _____

_____

22. How likely are you to recommend consultation services to other teachers within your school?

a. extremely likely
b. somewhat likely
c. not very likely
d. not likely at all

APPENDIX C

INITIAL DATA COLLECTION FORM

PROJECT RE-AIM

Initial Data Collection

PART A. BACKGROUND

1) Name: _____ (Note, before data are examined, summarized, or checked, names will be converted to a participant number.)

2) Best mailing address (To facilitate mailing materials)

_____
_____
_____
city zip

3) Discipline:
Consultant _____
School Psychologist _____
Social Worker _____
Other (Specify) _____

4) Office Phone _(___)_____

5) Home Phone _(___)_____

6) AEA No: _____

7) Total Years of Professional Work Experience in Education _____

8) Years of Experience in Current Role (e.g., as a social worker) _____

9) Years of Experience in Current AEA _____

10) Teaching experience Yes _____ No _____

If yes, Years Elementary Teaching _____
Years Secondary Teaching _____
Years Special Education Teaching _____

11) Highest Degree:
doctorate _____
specialist _____
masters _____

12) Is your employment
Full Time _____
Part Time _____

13) How many days are specified on your current contract _____

PART B. JOB SATISFACTION/ROLE

1) How satisfied are you in your current position as a consultant, school psychologist, or social worker? (Circle a number)

1	2	3	4	5
very satisfied		neutral		very dissatisfied

2) How well does your role conform to your expectations for the position?

1	2	3	4	5
very well		neutral		not at all well

3) Please estimate the amount of time you spent last year in special education evaluations and other special education activities, i.e., conducting evaluations to determine eligibility, writing reports on those evaluations, staffings, and re-evaluations.

Less than 10%	_____	51%-75%	_____
10%-25%	_____	76%-90%	_____
26%-50%	_____	Over 90%	_____

4) How many hours per week do you typically devote to:
a) consultation with teachers? _____
b) consultation with parents? _____
c) counseling with students? _____

5) In comparison to how your time is spent now, how would you prefer to spend your time? (Circle a number)

a) Consultation:

1	2	3	4	5
much more time		same as now		much less time

b) Special Education: Evaluations, Staffings, and Re-Evaluations:

1	2	3	4	5
much more time		same as now		much less time

6) My role is primarily determined by the principals of the schools I serve.

1	2	3	4	5
Strongly agree		Neutral		Strongly disagree

7) My role is primarily determined by my AEA supervisor.

1	2	3	4	5
Strongly agree		Neutral		Strongly disagree

8) It is difficult to change my role as long as the system of special education funding remains unchanged.

1	2	3	4	5
Strongly agree		Neutral		Strongly disagree

9) I have primary influence on my professional role. (Circle a number)

1	2	3	4	5
Strongly agree		Neutral		Strongly disagree

10) Were you employed by an Iowa AEA last year? Yes _____
No _____
If No, go to Part F, P.9.

PART C: PRE SPECIAL EDUCATION EVALUATION ACTIVITIES

Definition: Pre-Evaluation activities involve, "... attempts to resolve the presenting problem or behaviors of concern... prior to an initial comprehensive evaluation" (Iowa Rules of Special Education, 1985, p. 14)

1) SCREENING PHASE. Screening refers to a decision-making process to determine which of several subsequent steps are pursued, e.g., interventions in regular education, comprehensive evaluations, etc.

a) Were referrals screened in the setting(s) you worked in last year?

Yes, usually _____
No, typically not _____
Sometimes, about half the time _____
If No, go to Subsection 2) on P. 4

b) Was the same screening procedure used in the different attendance centers where you worked?

Yes _____ No _____

c) For the settings you served last year on Wednesday morning (or if Wed. AM was an "office" day, use Tuesday morning), please provide the following information on the screening procedure.

1) Was this, elementary_____ junior high_____ or high school_____

2) Please provide the name of the district or building _____
_____

3) Were all referrals screened? Yes _____ No _____

4) If no, about what percent were screened _____

5) Who served on the screening team (Check each that applies)
Referring Teacher _____; Principal _____; Consultant _____; School Psychologist _____; Social Worker _____; Counselor _____; Other Teacher(s) _____; Others _____ (please list)

6) Was there a screening committee? Yes ____ No ____

7) Did the screening committee meet regularly? Yes ___ No ___

8) How much influence did you have on the screening decisions?

Very much		Some		Very little
1	2	3	4	5

2) INTERVENTIONS PHASE. Pre-evaluation interventions means the development, implementation, and evaluation of plans designed to resolve learning or behavior problems in regular education PRIOR to consideration of special education eligibility.

a) Was there a systematic procedure to develop interventions prior to conducting a special education eligibility evaluation in the schools you served last year?

_____ Yes, In most, or most of the time
_____ Sometimes
_____ No. Typically not (if no, go to item 3 on p. 6)

b) Were the same pre-referral intervention procedures used at all attendance centers/buildings?

Yes _____ No _____

c) For the setting you served last year on Monday morning (or Thursday morning if Monday morning was an office day), please provide information on the pre-evaluation interventions.

1) What level? ___ Elementary; ___ Junior High; ___ High School
2) Name the District and Building _____
_____
3) Were classroom interventions developed for all cases prior to conducting a comprehensive evaluation?
____ Yes ____ No If No, about what percent ____

4) Who typically was involved in the design, implementation, and evaluation or these interventions?

____ Regular classroom teacher
____ Principal
____ Consultant
____ Counselor
____ School Psychologist
____ School Social Worker
____ Other (please specify)

5) In typical cases were baseline data gathered? Yes___ No___

6) In typical cases, was the intervention plan well defined and systematically implemented? Yes____No____

7) Was there usually an objective measure of the effects of the intervention? Yes____ No____

8) How much were you involved with these pre-evaluation interventions?

Very much		Some		Very little
1	2	3	4	5

3) Estimates of the effects of screening and pre-evaluation interventions.

Please estimate the percent of referrals that went to the stage of a comprehensive special education eligibility evaluation.

<10%	____	51-60%	____
11-20%	____	61-70%	____
21-30%	____	71-80%	____
31-40%	____	81-90%	____
41-50%	____	91-100%	____

PART D. SPECIAL EDUCATION EVALUATIONS AND RE-EVALUATIONS

1) Initial Evaluations

a) How many initial special education eligibility evaluations did you conduct last year (1985-86). (Please provide an estimate if you are uncertain of the exact number.)

_____

b) Which of the following activities do you typically do in initial special education evaluations? (Check the appropriate description)

	Nearly Always	Sometimes	Usually Not
1) Interview referral agent			
2) Define problems/questions to guide the evaluation			
3) Coordinate team assignments and activities			
4) Observe in the classroom			
5) Interview parents/social history			
6) Administer one or more standardized tests			
7) Collect Curriculum Based Measures			
8) Use Checklists or Rating Scales			
9) Use informal or nonstandardized tests			
10) Administer projective devices, figure drawings			
11) Write reports			
12) Attend staffing and present information			
13) Assist in writing an IEP			
14) Other - Please specify			

c) About what percent of the initial special education evaluations resulted in special education placements?

<10%	____	51-60%	____
11-20%	____	61-70%	____
21-30%	____	71-80%	____
31-40%	____	81-90%	____
41-50%	____	91-100%	____

2) Re-evaluations

a) How many re-evaluations did you conduct last year? _____

b) Which of the following activities do you typically do in re-evaluations?

	Nearly Always	Sometimes	Usually Not
1) Interview referral agent			
2) Define problems/questions to guide the evaluation			
3) Coordinate team assignments and activities			
4) Observe in the classroom			
5) Interview parents/social history			
6) Administer one or more standardized tests			
7) Collect Curriculum Based Measures			
8) Use Checklists or Rating Scales			
9) Use informal or nonstandardized tests			
10) Administer projective devices, figure drawings			
11) Write reports			
12) Attend staffing and present information			
13) Assist in writing an IEP			
14) Other - Please specify			

c) About what percent of the re-evaluations you did last year resulted in students being placed out of special education?

<10%	____	51-60%	____
11-20%	____	61-70%	____
21-30%	____	71-80%	____
31-40%	____	81-90%	____
41-50%	____	91-100%	____

PART E: CONSULTATION

Definition: Consultation refers to fairly formal contacts with parents and teachers in which there is a collaborative effort to resolve (a) problem(s) exhibited by a student. It does not mean, merely, any conversation between professionals.

1) How many consultation cases did you conduct last year? _____

2) Which of the following activities do you usually do in consultation cases?

	Nearly Always	Sometimes	Usually Not
a) Interview teacher/parent			
b) Develop behavioral definition of the problem with teacher/parent			
c) Assist parent/teacher in developing objective measure of problem behavior			
d) Assist parent/teacher in, or independently carry out, collection of data on problem behavior			
e) Review results of objective measures			
f) Conduct functional analysis, i.e., identify specific antecedent, situational, and consequent events			
g) Assist in development of interventions designed to resolve problem behavior(s)			
h) Monitor implementation of interventions			
i) Evaluate outcomes of interventions			
j) Assist parent/teacher in developing a generalization/maintenance plan			

3) What consultation approach do you typically use? (Please check only one.)

a) Mental Health _____
b) Behavioral _____
c) Organization Development _____
d) No Systematic Model _____
e) Consultation Typically Not Used _____

4) Have you had a graduate level course on applied behavioral analysis?

_____ Yes _____ No

5) How would you characterize your theoretical orientation in terms of this scale: (Circle a number)

1	2	3	4	5	6	7	8	9
Strongly Behavioral				Eclectic				Non-behavioral

6) Please rate your knowledge of the following behavioral interventions and your experience in using them with students or through consultation with teachers or parents. Check the description that most accurately characterizes your knowledge/experience.

	Know well and Have used in working with teachers /students	Know well; not used very much: but could use with teachers /students	heard of, but do not know well and have not used very much	Do not know this technique
Contingency Contracting				
Positive Reinforcement				
Negative Reinforcement				
DRL				
DRO				
Extinction				
IRL				
Fading				
Time Out				
Premark Principle				
Modeling				
Cognitive B. Mod.				
Lorenz Effect				
Negative Practice				
Overcorrection				
Good Behavior Game				
Response Cost				
Systematic Desensitization				
Token Economy				
Reinforcement Bundling				
Relaxation Training				
Punishment				
Shaping				

PART F: CASE STUDIES

1) Please describe what you would typically do with the referral described below. If you are typically involved with the academic assessment, please describe the formal and/or informal academic measures you would use? If you typically are not involved with the academic assessment, please summarize a) What you would do as part of the team evaluating this child and b) who would do the academic assessment and what specific formal and/or informal measures would be used.

Child's name:	Jody
Grade:	4
Age:	10-6
Date of Evaluation:	2/5/86

Jody was referred by her teacher because she hasn't been making much progress in academic skills. Her teacher reported in the referral that she is having much difficulty with reading and that her written language skills are also very poor. Additionally, the teacher indicated that although she is failing academically, she appears to be trying as hard as she can.

2) Please think of a student, with whom you were involved last year, similar to the student described below. Then please respond to the items that follow concerning the nature of the evaluation that was conducted by you and your colleagues.

Child's Name:	Biff
Grade:	1
Child's Age:	7-6
Date of Evaluation:	5/15/86

Biff was referred by his teacher because of poor academic progress during the first grade. His teacher reports that he has extremely poor handwriting with numerous reversals, inversions, and poor formation. Additionally, his reading is far behind his peers while math appears not to be a problem. His teacher also indicated that he rarely completes his assigned work.

Note: If you were working exclusively at a secondary level, answer the following items in terms of a secondary level student with very poor grades who is not completing assignments and seems to have a bad attitude toward school.

	Yes, By Me	Yes, By Someone Else	Role	No or Don't Know
a) Was the referral screened?				
b) Consultation to behaviorally define the problem				
c) Consultation to develop classroom based objective measure of the problem?				
d) Data collection in the classroom using this objective measure				
e) Functional analysis of relationship of environment variables to problem behavior?				
f) Assistance to teacher in designing a pre-evaluation intervention				
g) Monitoring implementation of the intervention				
h) Evaluating success of the intervention				
I) Development of specific questions to guide the special education eligibility				
j) Assessment of academic skills using measures from the classroom curriculum				
k) Assessment of academic skills using standardized tests?				
l) Assessment of ability using IQ test				
m) Social/developmental history				
n) Assessment of attention and time on task through observation				

APPENDIX D

ADHERENCE TO BEHAVIORAL CONSULTATION CODING FORM

NAME: _____

ID #: _____

PII Tape 1 or 2/Teacher _____

Following is feedback on whether the goals and objectives of this interview were met and the appropriate information was gathered.

Interview Objective	Met	Partially Met	Unmet
1. Behavioral definition of the problem			
2. Tentative strength of the behavior			
3. Antecedent Conditions			
4. Consequent Conditions			
5. Situational Conditions			
6. Summary Statements			
7. Tentative Goal			
8. Data Collection System			
9. Next Appointment			

Table D1. Frequency Data on Total Interviewing Competency Scores

Total Interviewing Competency Score	N	Percent
9	3	10.3
10	3	10.3
11	5	17.2
12	4	13.8
13	2	6.9
14	1	3.4
15	3	10.3
16	2	6.9
17	2	6.9
18	2	6.9
20	1	3.4
23	1	3.4

APPENDIX E

PSYCHOMETRIC INFORMATION FOR THE CONSUMER SATISFACTION QUESTIONNAIRE

Table E1. Correlations Between Responses to the Consumer Satisfaction Questionnaire

Item	2	5	6	7	17a	17b	17c	17d	17e	22
2	--	.79	.64	.85	.48	.27	.51	.45	.54	.77
5	.79	--	.63	.73	.39	.21	.62	.50	.32	.76
6	.64	.63	--	.59	.40	.30	.47	.39	.35	.55
7	.85	.73	.59	--	.72	.39	.56	.48	.67	.76
17a	.48	.39	.40	.72	--	.67	.63	.59	.71	.60
17b	.27	.21	.30	.39	.67	--	.46	.59	.56	.37
17c	.51	.62	.47	.56	.63	.46	--	.81	.49	.68
17d	.45	.50	.39	.48	.59	.59	.81	--	.59	.67
17e	.54	.32	.35	.67	.71	.56	.49	.59	--	.47
22	.77	.76	.55	.76	.60	.37	.68	.67	.47	--

Table E2. Psychometric Properties of the Consumer Satisfaction Questionnaire

Item	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
2	37.10	.80	.91
5	37.93	.73	.91
6	39.17	.62	.92
7	35.01	.85	.91
17a	40.38	.73	.92
17b	43.56	.51	.93
17c	38.03	.73	.91
17d	41.18	.71	.92
17e	39.64	.65	.92
22	38.41	.83	.91

APPENDIX F

CORRELATIONS BETWEEN THE CONSULTANT AND CONSULTEE INDEPENDENT VARIABLES

Table F1. Correlations Between the Consultant and Consultee Independent Variables

Independent Variables	Consultant Percent Dominant	Consultant Percent Dominant-affiliative	Consultant Percent Submissive	Consultee Percent Dominant	Consultee Percent Dominant-affiliative	Consultee Percent Submissive
Consultant Percent Dominant	--	-.64***	.12	-.12	.48*	-.29
Consultant Percent Dominant-affiliative	-.64***	--	-.71***	.31	-.55*	.33
Consultant Percent Submissive	.12	-.71***	--	-.44	.22	-.02
Consultee Percent Dominant	-.12	.31	-.44	--	-.01	-.03
Consultee Percent Dominant-affiliative	.48*	-.55*	.22	-.01	--	-.67**
Consultee Percent Submissive	-.29	.33	-.02	-.03	-.67**	--

* p<.05, two-tailed ** p<.01, two-tailed *** p<.001

APPENDIX G

MULTIPLE REGRESSION TABLES

Table G1. Consultant and Consultee Independent Variables Predicting Changes in Consultee Satisfaction

Predictors	Semi-partial r	Beta	t	p	Multiple R	R^2	F	p
Consultant Percent Dominant	.15	.25	.768	.45	.27	.07	.6056	.62
Consultant Percent Dominant-affiliative	.09	.20	.430	.67				
Consultant Percent Submissive	.18	.34	.918	.37				
Consultee Percent Dominant	.10	.10	.372	.72	.11	.01	.0536	.98
Consultee Percent Dominant-affiliative	.03	.04	.126	.90				
Consultee Percent Submissive	.04	.06	.164	.87				

Table G2. Consultant and Consultee Independent Variables Predicting Changes in Client Behavior Change

Predictors	Semi-partial r	Beta	t	p	Multiple R	R^2	F	p
Consultant Percent Dominant	.06	.09	.286	.78	.15	.02	.1963	.90
Consultant Percent Dominant-affiliative	.04	.08	.182	.86				
Consultant Percent Submissive	-.05	-.09	-.256	.80				
Consultee Percent Dominant	.24	.24	.992	.34	.37	.14	.7907	.52
Consultee Percent Dominant-affiliative	.23	.31	.974	.35				
Consultee Percent Submissive	.29	.39	1.204	.25				

Table G3. Consultant and Consultee Independent Variables Predicting Changes in Treatment Integrity

Predictors	Semi-partial r	Beta	t	p	Multiple R	R^2	F	p
Consultant Percent Dominant	-.18	-.30	-.936	.36	.27	.07	.6334	.60
Consultant Percent Dominant-affiliative	-.11	-.25	-.553	.59				
Consultant Percent Submissive	-.18	-.33	-.935	.36				
Consultee Percent Dominant	.05	.05	.222	.83	.29	.08	.4606	.71
Consultee Percent Dominant-affiliative	.03	.05	.138	.89				
Consultee Percent Submissive	.24	.32	.951	.36				

Table G4. Consultant and Consultee Independent Variables Predicting Changes in Perceptions of Client Behavior Change

Predictors	Semi-partial r	Beta	t	p	Multiple R	R^2	F	p
Consultant Percent Dominant	-.20	-.33	-1.175	.25	.54	.29	3.4123	.03
Consultant Percent Dominant-affiliative	-.09	-.20	-.516	.61				
Consultant Percent Submissive	-.33	-.59	-1.947	.06				
Consultee Percent Dominant	.28	.28	1.241	.23	.50	.25	1.6743	.22
Consultee Percent Dominant-affiliative	-.21	-.28	-.946	.36				
Consultee Percent Submissive	.13	.17	.571	.58				

APPENDIX H

PAIRED SAMPLE T TESTS

Table H1. Comparisons Between Consultant and Consultee Rates of Bids and Responses

Variables	Mean	SD	t-value	df	2-tailed significance
Consultant Bids Accepted	87.9%	7.5	-1.26	19	.22
Consultee Bids Accepted	79.6%	24.6			
Consultant Bids Evaded	8.7%	6.5	.44	19	.67
Consultee Bids Evaded	11.7%	21.0			
Consultant Bids Rejected	2.0%	2.2	1.82	19	.08
Consultee Bids Rejected	8.8%	16.1			
Consultant Dominant	5.3%	4.2	-3.54	19	.002
Consultee Dominant	1.0%	4.5			
Consultant Dominant-affiliative	82.9%	7.4	-7.57	19	.000
Consultee Dominant-affiliative	21.8%	31.9			
Consultant Submissive	8.7%	4.4	7.06	19	.000
Consultee Submissive	63.4%	34.6			
Consultant Total Bids	35.6	13.6	-15.17	32	.000
Consultee Total Bids	1.4	1.5			

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